Dairy Situation

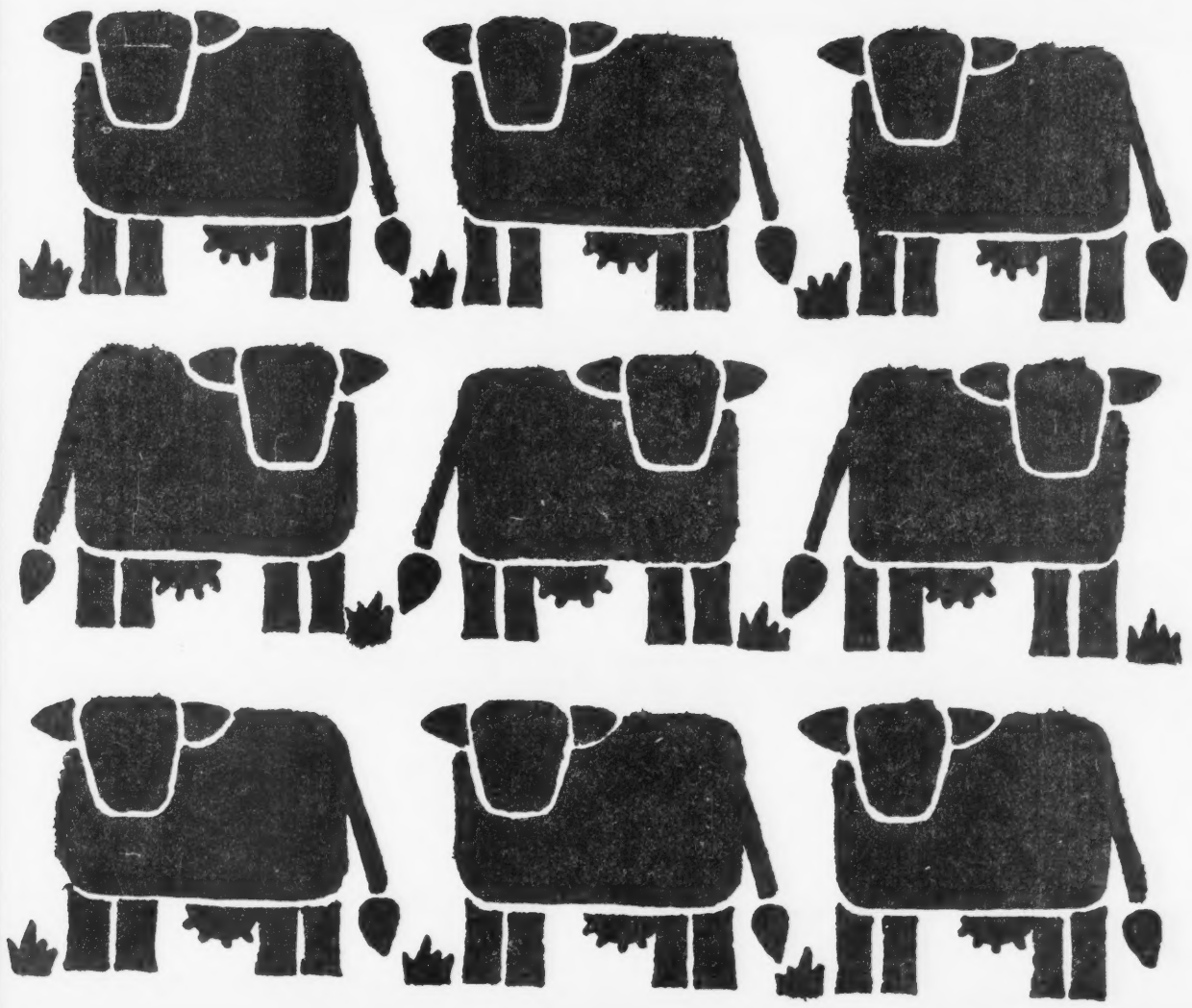
Economics, Statistics, and Cooperatives Service

U.S. Department of Agriculture

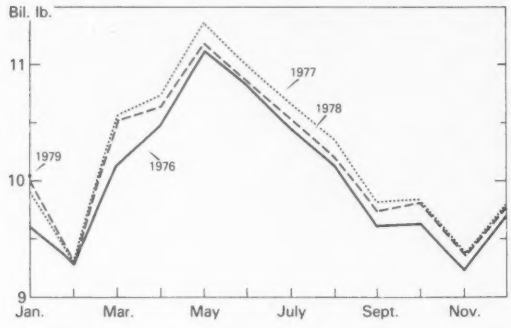
Approved by the World Food and Agricultural Outlook and Situation Board

DS-374

MARCH 1979



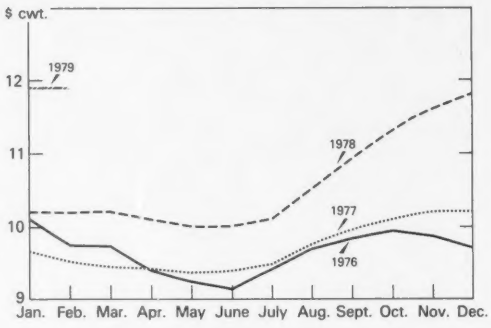
U.S. Milk Production by Months



USDA Neg. ESCS 5498-79(3)

Figure 1

Milk Prices*

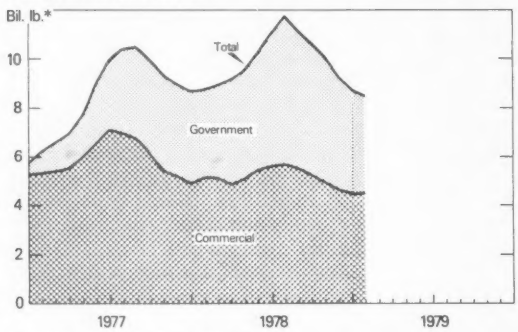


*U.S. average price received by farmers for deliveries to plants and dealers.

USDA Neg. ESCS 5449-79(3)

Figure 2

Dairy Product Stocks°

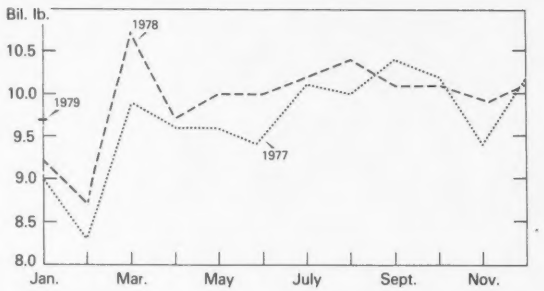


°As of first of month. *Milk equivalent, fat solids basis.

USDA Neg. ESCS 8448-79(3)

Figure 3

Commercial Disappearance of Milk in All Products*

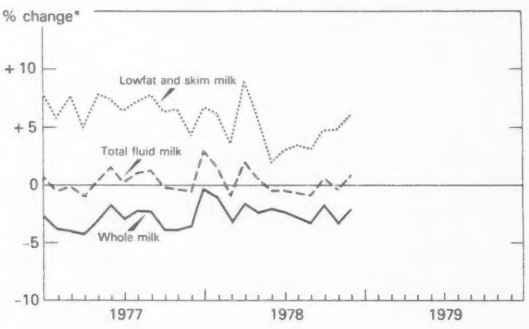


*Milk equivalent.

USDA Neg. ESCS 2075-79(3)

Figure 4

Daily Average Sales of Fluid Milk Items

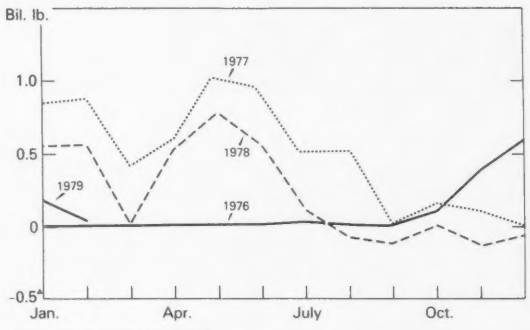


*From year earlier, adjusted for calendar composition.

USDA Neg. ESCS 2705-79(3)

Figure 5

USDA Dairy Product Purchases*



*Net removals, milk equivalent, fat solids basis.
^Negative figures denote domestic sales exceeded purchases.

USDA Neg. ESCS 8449-79(3)

Figure 6

In This Issue

	Page
Milk Output Above 1978 ... 1979 to total 1 percent higher...Very favorable milk-feed price relationships expected...Cull cow prices to be higher but replacement herd large	5
Competition Holds Milk Prices ... Support price adjustment of 75 to 85 cents to keep milk prices from declining...1979 prices to average 10 to 14 percent higher...Cash receipts up 8 percent last year...Wholesale markets unsettled...Retail prices rose sharply through January	12
Cheese Output Draws Milk from Butter-Powder	15
Growth in total commercial use to be slow this year...Sales rose 3 billion pounds to new record in 1978...Larger sales boosted per person use	
Commercial Stocks Down ... Strong stock demand expected this spring...USDA purchases tiny in January-February...CCC inventories down from 1978 but still large	22
1978 Cheese Imports Much Larger ... Exports smaller but shipments up...EC surplus problems continue	25
List of Tables	29

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SUMMARY

Economic conditions likely will favor expanded milk output this year, after 1978's slight downturn. Quite favorable milk-feed price relationships probably will lead to heavier concentrate feeding and more normal gains in output per cow. Higher slaughter cow prices will exert downward pressure on milk cow numbers but relatively favorable dairy incomes and the large replacement herd will be moderating factors. For the year, output is expected to total about 1 percent larger than 1978's 122 billion pounds, with the largest gains coming this spring.

Following last year's sharp rise to record levels, commercial use this year probably will expand but slower than the trend rate of about 1 percent. While growing consumer incomes are expected to keep demand strong, increases in retail dairy prices, unlike 1978, probably will match or slightly exceed rises in all food prices. Combined with the low commercial stocks at the start of the year, even a slight rise in commercial use probably will be sufficient to hold USDA price support purchases to moderate levels. However, small deviations from expected supply or demand conditions could easily

The *Dairy Situation* is published in March, May, July, October, and December.

result in either a substantial surplus or strong prices throughout this year.

Milk production moved slightly above a year earlier in January as expanded output per cow outweighed a small year-to-year decline in milk cow numbers. Whether the harsh winter weather will affect production as much as a year ago will not be known until spring.

Two atypical patterns shaped 1978 production. Early culling brought milk cow numbers down sharply during the first half of the year. As these cows were replaced by heifers, cow numbers crept upward during the second half of 1978. Secondly, output per cow totaled only slightly above 1977—partially due to weather impacts—despite heavier concentrate feeding.

Prices of manufacturing grade milk this February had slipped relatively little from the seasonal peak, reflecting brisk competition for milk. Farmers received an average $11.90 per 100 pounds of all milk in February, equaling the later-than-normal peak in January and 17 percent higher than a year earlier. In 1978, milk prices averaged about $10.58, up 9 percent from 1977.

The April 1 adjustment to the support price (now expected to be an increase of 75 to 85 cents) probably will result in manufacturing grade milk prices stabilizing near the current level. Seasonal rises during the second half of 1979 will depend on the degree of expansion in milk output, demand for dairy products, the level of commercial stocks, and the support purchase and sell-back prices set on October 1. Under expected conditions, a moderate second-half increase will result in milk prices in 1979 averaging 10 to 14 percent higher than 1978.

Increases in retail dairy prices during the first half of 1979 will slow substantially from the rapid pace of the last half of 1978. For the year, retail prices probably will average 8 to 11 percent above 1978.

With the expected higher farm milk prices, 1979 increases in cash receipts to dairymen probably will rise more than production costs—leaving net income relatively favorable. In 1978, cash receipts rose about 8 percent to $12.7 billion.

After the sharp drop just before Christmas, wholesale butter prices have remained close to the current support purchase price until early March. Prices of American cheese in barrels had dropped about 5 cents per pound by early March. On the other ha..d, wholesale prices of nonfat dry milk and block cheese were just slightly below their seasonal peaks. After April 1, wholesale prices probably will stabilize at the higher support purchase prices.

In early 1979, manufactured dairy products used somewhat less milk than a year earlier. Cheese output was well above a year ago but butter-powder output trailed substantially. Last year, 1½ percent less milk was used in manufactured products than during the preceding year.

Led by jumps in sales of cheese and butter, commercial disappearance of milk and dairy products in 1978 rose 3 billion pounds to over 119 billion pounds milk equivalent, 2½ percent larger than the 1976 record. Greater consumer purchasing power and higher retail prices for meat and other foods generated strong demand for dairy products. The large increase in commercial use raised per capita civilian consumption by more than 1 percent in 1978. USDA donations were slightly smaller. This year, per capita consumption is expected to remain close to the 1978 level.

On February 1, commercial stocks of both milkfat and milk solids-not-fat remained well below a year earlier. The demand for dairy products to seasonally rebuild commercial stocks likely will be strong through the flush season and industry holdings probably will rise above the relatively low levels of a year earlier.

USDA purchased small amounts of butter and nonfat dry milk in January-February, a sharp contrast to the heavy purchases of a year earlier. Uncommitted CCC inventories of both products remained large on March 1 but were considerably less than a year ago.

Heavy cheese imports during the last 2 months of 1978 (partially because the authority to waive countervailing duties was due to expire) resulted in a 16-percent increase for the year. Imports of all dairy products were equivalent to 2.3 billion pounds of milk, up about a sixth from the prior year. Commercial exports slipped in 1978 but food aid exports of nonfat dry milk and shipments of dairy products to U.S. Territories were somewhat larger.

Surplus problems in the European Community continued unabated in 1978 as milk deliveries climbed 5 percent. Most of the increase in milk production went into butter-powder output.

DAIRY SITUATION

SITUATION AND OUTLOOK

PRODUCTION

Milk Output Moves Above a Year Earlier

Milk production started 1979 almost one-half percent larger than a year earlier, the first significant gain in a year. Although still modest by historic standards, the 1-percent gain in output per cow was the largest year-to-year rise since January 1978. Meanwhile, the rate of decline in cow numbers had slowed to less than 1 percent, the smallest year-to-year decline since September 1977.

In January, milk production in most States was close to a year earlier. Half of the 33 States which report milk output each month posted changes of about 1 percent or less, while only 5 States had changes of 3 percent or more. Among the 5 major dairy States, substantially more milk than a year earlier was produced in Wisconsin, New York, and Pennsylvania but less in California and Minnesota.

Regionally, the important Lake States and Northeast regions started 1979 almost 2 percent above a year earlier. The Delta, Southern Plains, and Pacific regions showed declines of 1 to 2 percent, while all other regions were close to a year earlier.

Outlook for 1979

Economic conditions for milk production in 1979 appear to favor expansion. Milk prices will run well above a year earlier throughout the year. Feed prices will stay moderate through the first half of 1979 and feed grain stocks are expected to be large going into next fall's harvest. On the other hand, inflation has worsened and production costs other than feed may rise more rapidly than during the past 2 years.

Milk production per cow probably will expand at a more typical pace than in 1978. Milk-feed price relationships are expected to be quite favorable through most of 1979 and heavier concentrate feeding is likely.

Slaughter cow prices will be above the high 1978 levels and will continue to encourage heavier culling. However, the large number of heifers entering the herd will be a moderating influence. Milk cow numbers in the first half probably will decline more slowly than a year ago, but likely will not repeat last year's second-half resurgence.

Utility cow prices, Omaha

Month	1977	1978	1979
	Dollars per cwt.		
January	22.95	27.59	47.33
February	23.88	29.45	50.81
March	26.67	32.44	
April	27.63	36.94	
May	26.57	39.21	
June	25.64	37.61	
July	25.23	38.09	
August	25.38	37.85	
September	26.12	39.75	
October	24.89	40.46	
November	23.80	39.30	
December	25.02	41.85	
Average	25.32	36.71	

Again this winter, parts of the Midwest have been hit with very harsh weather. Heavier culling because of weather injury and adverse impact on milk per cow (the effects of which linger at least into spring) may reoccur.

Milk production probably will show slight increases from a year ago this winter. This spring, output likely will run above the relatively weak 1978 flush season by a somewhat wider margin. Second-half production will be influenced heavily by the amount of seasonal strengthening in milk prices, the support price for the new marketing year beginning October 1, and feed prices, but probably will be slightly larger than in 1978. For all of 1979, milk output is expected to total about 1 percent larger than 1978, but could easily range from about the same to 2 percent more.

1978 Milk Production Review

Milk production in 1978 totaled 121.9 billion pounds, down slightly from 1977's 122.7 billion pounds (table 1). Last year's output was shaped by two atypical patterns. Milk cow numbers dropped sharply during the first half of 1978 but increased during the rest of the year. Secondly, output per cow posted an unusually small increase, even

Table 1--Milk production, milk per cow, and milk cows on farms, by months, 1972-78, with comparisons

Month	1972	1973	1974	1975	1976	1977	1978 1/	Change from year earlier	
								1977	1978
	Milk production 2/								
	Million pounds							Percent	
January	9,728	9,532	9,335	9,341	9,600	9,887	9,994	+3.0	+1.1
February	9,399	8,945	8,763	8,766	9,290	9,301	9,287	+ .1	- .2
March	10,455	10,184	9,989	9,986	10,281	10,572	10,523	+2.8	- .5
April	10,572	10,303	10,124	10,092	10,464	10,725	10,631	+2.5	- .9
May	11,280	10,960	10,869	10,778	11,110	11,354	11,178	+2.2	-1.6
June	10,962	10,542	10,615	10,447	10,806	10,989	10,851	+1.7	-1.3
July	10,455	10,021	10,171	9,972	10,444	10,671	10,534	+2.2	-1.3
August	9,989	9,496	9,711	9,538	10,129	10,363	10,213	+2.3	-1.4
September	9,442	8,885	9,137	9,063	9,607	9,820	9,733	+2.2	- .9
October	9,438	8,957	9,100	9,180	9,626	9,838	9,832	+2.2	- .1
November	8,925	8,603	8,663	8,830	9,231	9,391	9,364	+1.7	- .3
December	9,380	9,063	9,109	9,341	9,681	9,787	9,788	+1.1	0
Total 3/	120,025	115,491	115,586	115,334	120,269	122,698	121,928	+2.0	- .6
	Milk per cow 2/								
	Pounds							Percent	
January	827	822	828	833	866	897	915	+3.6	+2.0
February	800	774	778	782	839	844	852	+ .6	+ .9
March	890	884	888	892	929	961	967	+3.4	+ .6
April	901	898	901	903	946	976	980	+3.2	+ .4
May	963	958	968	966	1,006	1,034	1,033	+2.8	- .1
June	937	924	946	938	978	1,003	1,004	+2.6	+ .1
July	895	881	907	896	945	974	974	+3.1	0
August	856	837	866	858	917	945	944	+3.1	- .1
September	810	785	814	816	870	896	899	+3.0	+ .3
October	810	792	812	827	872	899	907	+3.1	+ .9
November	767	761	773	797	836	858	864	+2.6	+ .7
December	807	802	812	843	877	895	902	+2.1	+ .8
Total	10,259	10,119	10,293	10,350	10,879	11,181	11,240	+2.8	+ .5
	Milk cows on farms 4/								
	Thousands							Percent	
January	11,769	11,601	11,279	11,208	11,087	11,026	10,923	- .6	- .9
February	11,755	11,557	11,261	11,203	11,076	11,018	10,903	- .5	-1.0
March	11,742	11,518	11,254	11,189	11,062	11,004	10,877	- .5	-1.2
April	11,734	11,472	11,240	11,178	11,061	10,992	10,844	- .6	-1.3
May	11,718	11,439	11,225	11,159	11,049	10,978	10,824	- .6	-1.4
June	11,701	11,407	11,216	11,143	11,049	10,961	10,808	- .8	-1.4
July	11,683	11,375	11,215	11,131	11,052	10,960	10,811	- .8	-1.4
August	11,671	11,348	11,219	11,121	11,049	10,968	10,821	- .7	-1.3
September	11,659	11,322	11,220	11,108	11,039	10,963	10,832	- .7	-1.2
October	11,653	11,314	11,213	11,101	11,045	10,945	10,837	- .9	-1.0
November	11,643	11,308	11,209	11,086	11,044	10,942	10,837	- .9	-1.0
December	11,630	11,304	11,215	11,086	11,035	10,933	10,853	- .9	- .7
Annual average	11,700	11,413	11,230	11,143	11,055	10,974	10,848	- .7	-1.1

1/ Preliminary.
2/ Excludes milk sucked by calves.
3/ May not add due to rounding.
4/ Excludes heifers not yet fresh.

though milk-feed price relationships stayed favorable throughout the year. The harsh winter weather in the Midwest and heavy rains in California probably had more impact than was apparent in the preliminary data.

Between January and June, milk cow numbers dropped 1 percent and the year-to-year decline sharpened from less than 1 percent in January to almost 1½ percent in June. The number of cows culled due to winter injury probably was unusually high. In addition, the sharp increases in cull cow prices likely accelerated the overall culling rate and some farmers may have sent cows to slaughter earlier than normal in case slaughter cow prices were to decline. The increase of almost a half percent during June-December represented, to a large extent, the replacement of those cows culled early. In addition, the rising farm milk prices probably helped offset the impact of the continued high slaughter cow prices. The second-half increase was the first time in a quarter of a century that cow numbers rose over a 6-month period. The 1978 average number of milk cows was more than 1 percent below 1977.

The bad weather of early 1978, combined with generally lower quality forage, probably had a sizable impact on output per cow as well. Farmers fed more concentrates than in 1977, but this may have just compensated for the physical stress and the poorer forage. Milk per cow remained very close to a year earlier in April-September. By last fall, output per cow had recovered to post significant, but relatively small, increases. For all of 1978, milk production per cow was just a half percent higher than the previous year.

After posting the only significant gain of the year in January, milk production slipped about 1½ percent below a year earlier during May-August. Since commercial stocks had been held to low levels in anticipation of a heavy surplus during the flush season, this decline in milk output, combined with strong demand for dairy products, was sufficient to trigger the sharp turnaround in dairy prices. Although milk production recovered during the last 4 months of the year, supplies were not sufficient to offset the price strength generated during the summer.

Weakness in 1978 milk production was fairly widespread. The only increases from a year earlier were small rises in the Northeast, Mountain, Southern Plains, and Pacific regions. Large declines occurred in the Corn Belt and Northern Plains, with the other regions down 2 percent or less (tables 2 and 3). The relative proportion of homegrown concentrates fed to milk cows probably accounted for some of the difference in regional milk production patterns in recent years. While all dairy enterprises have had improved returns due to the low feed prices, those farms with both dairy and feed grain enterprises have not received as large an increase in total farm returns as those farms purchasing feed.

Of the 5 major dairy States, New York's milk production gain of almost 3 percent was the largest, but Pennsylvania and Wisconsin posted 1-percent increases. As a result of heavy winter rains, Californian production was down slightly while Minnesota had 4 percent less milk.

Replacement Herd Large

The number of dairy heifers kept for replacement purposes totaled more than 3.9 million head on January 1, 1979, up 1 percent from both 1977 and 1978. There were more than 36 heifers per 100 cows in the milking herd, the largest ratio on that date since 1975 and a substantially higher ratio than in the years prior to 1974. This large replacement herd will help moderate declines in milk cow numbers in the coming year (figure 7).

The January 1 cattle inventory showed 10.85 million milk cows on farms, down less than 1

Table 2— Milk cow numbers, milk per cow, and changes by production regions, 1978

Production regions	Milk cow numbers[1]	Milk per cow	1978 change from year earlier		
			Milk cow numbers[1]	Milk per cow	Milk production
	1,000 hd.	Pounds	Percent		
Northeast	2,175	11,471	-1.1	+2.5	+1.3
Lake States	3,051	11,516	-.7	+.2	-.4
Corn Belt	1,472	10,632	-3.5	+.2	-3.3
Northern Plains	532	9,752	-3.4	-1.0	-4.4
Appalachian	830	9,967	-1.4	-.5	-2.0
Southeast	460	9,583	-1.5	-.3	-1.8
Delta States	323	8,108	-3.0	+1.0	-2.0
Southern Plains	424	10,667	-1.6	+2.4	+.7
Mountain	442	12,223	-.2	+1.3	+1.1
Pacific	1,125	13,879	+2.6	-2.3	+.3
United States[2]	10,848	11,240	-1.1	+.5	-.6

[1] Average number during the year. [2] Includes Alaska and Hawaii.

Table 3--Milk: Production by production regions, 1974-78, with comparisons

State and region	1974	1975	1976	1977	1978 1/	1978	
						As percent of U.S. total	Change from year earlier
	Mil. lb.					Percent	
Maine	611	629	628	638	638	0.5	0
New Hampshire	329	336	335	339	329	.3	-2.9
Vermont	1,945	2,009	2,093	2,100	2,180	1.8	+3.8
Massachusetts	593	601	598	597	572	.5	-4.2
Rhode Island	63	63	60	57	55	2/	-3.5
Connecticut	613	608	616	624	612	.5	-1.9
New York	9,822	9,964	10,198	10,224	10,493	8.6	+2.6
New Jersey	551	528	545	549	525	.4	-4.4
Pennsylvania	6,980	7,140	7,507	7,791	7,881	6.5	+1.2
Delaware	128	127	135	139	129	.1	+7.2
Maryland	1,505	1,510	1,549	1,575	1,540	1.3	-2.2
NORTHEAST	23,140	23,515	24,264	24,633	24,954	20.5	+1.3
Michigan	4,350	4,411	4,620	4,761	4,793	3.9	+.7
Wisconsin	18,713	18,900	20,296	21,041	21,252	17.4	+1.0
Minnesota	9,382	8,946	9,239	9,483	9,089	7.5	-4.2
LAKE STATES	32,445	32,257	34,155	35,285	35,134	28.8	-.4
Ohio	4,221	4,259	4,503	4,455	4,275	3.5	-4.0
Indiana	2,260	2,210	2,240	2,270	2,178	1.8	-4.1
Illinois	2,522	2,440	2,483	2,515	2,403	2.0	-4.5
Iowa	4,025	3,893	3,954	4,030	4,034	3.3	+.1
Missouri	2,989	2,840	2,919	2,918	2,760	2.3	-5.4
CORN BELT	16,017	15,642	16,099	16,188	15,650	12.8	-3.3
North Dakota	980	917	948	954	921	.8	-3.5
South Dakota	1,642	1,556	1,668	1,670	1,600	1.3	-4.2
Nebraska	1,477	1,431	1,409	1,344	1,269	1.0	-5.6
Kansas	1,403	1,403	1,463	1,461	1,398	1.1	-4.3
NORTHERN PLAINS	5,502	5,307	5,488	5,429	5,188	4.3	-4.4
Virginia	1,705	1,756	1,884	1,905	1,902	1.6	-.2
West Virginia	350	350	356	333	344	.3	+3.3
North Carolina	1,462	1,490	1,590	1,592	1,567	1.3	-1.6
Kentucky	2,370	2,319	2,383	2,426	2,322	1.9	-4.3
Tennessee	1,971	2,031	2,096	2,181	2,138	1.8	-2.0
APPALACHIAN	7,858	7,946	8,309	8,437	8,273	6.8	-1.9
South Carolina	515	512	521	523	510	.4	-2.5
Georgia	1,190	1,199	1,279	1,288	1,290	1.1	+.2
Florida	1,875	1,956	2,023	1,993	1,948	1.6	-2.3
Alabama	708	686	682	684	660	.5	-3.5
SOUTHEAST	4,288	4,353	4,505	4,488	4,408	3.6	-1.8
Mississippi	907	876	862	858	836	.7	-2.6
Arkansas	706	707	710	725	720	.6	-.7
Louisiana	1,059	1,054	1,088	1,089	1,063	.9	-2.4
DELTA STATES	2,672	2,637	2,660	2,672	2,619	2.1	-2.0
Oklahoma	1,137	1,060	1,102	1,120	1,090	.9	-2.7
Texas	3,380	3,208	3,309	3,372	3,433	2.8	+1.8
SOUTHERN PLAINS	4,517	4,268	4,411	4,492	4,523	3.7	+.7
Montana	294	278	275	296	301	.2	+1.7
Idaho	1,555	1,555	1,554	1,600	1,633	1.3	+2.1
Wyoming	123	110	113	124	117	.1	-5.6
Colorado	866	845	835	848	872	.7	+2.8
New Mexico	338	366	405	426	458	.4	+7.5
Arizona	810	840	882	914	896	.7	-2.0
Utah	925	919	924	936	935	.8	-.1
Nevada	167	168	191	198	188	.2	-5.1
MOUNTAIN	5,073	5,081	5,179	5,342	5,400	4.4	+1.1
Washington	2,312	2,322	2,428	2,546	2,682	2.2	+5.3
Oregon	1,004	990	1,024	1,052	1,065	.9	+1.2
California	10,596	10,853	11,583	11,968	11,867	9.7	-.8
PACIFIC	13,912	14,165	15,035	15,566	15,614	12.8	+.3
Alaska	18	17	16	16	15	2/	-6.2
Hawaii	139	146	148	150	150	.1	0
UNITED STATES	115,586	115,334	120,269	122,698	121,928	100.0	-.6

1/ Preliminary. 2/ Less than 0.05 percent.

Table 4--Milk production and factors affecting supply, United States, selected years, 1955-79

Year	Milk cattle on farms, January 1 1/			Milk cows on farms, average during year	Milk production		Average prices received by farmers per 100 pounds		
	Milk cows and heifers that have calved	Milk cow replacements; heifers 500 pounds and over			Per cow	Total	All milk, wholesale	Milk, eligible for fluid market	Milk, manufacturing grade
		Total	Per 100 cows						
	Thou.	Thou.	No.	Thou.	Lb.	Mil. lb.	Dol.	Dol.	Dol.
1955	21,320	6,832	32.0	21,044	5,842	122,945	4.01	4.50	3.15
1960	17,650	5,686	32.2	17,515	7,029	123,109	4.21	4.69	3.25
1965	15,380	4,780	31.1	14,953	8,305	124,180	4.23	4.63	3.34
1966	14,490	4,450	30.7	14,071	8,522	119,912	4.81	5.17	3.97
1967	13,725	4,215	30.7	13,415	8,851	118,732	5.02	5.43	4.06
1968	13,115	4,080	31.1	12,832	9,135	117,225	5.24	5.67	4.22
1969	12,550	3,990	31.8	12,307	9,434	116,108	5.49	5.87	4.45
1970	12,091	3,880	32.1	12,000	9,751	117,007	5.71	6.05	4.70
1971	11,909	3,843	32.3	11,839	10,015	118,566	5.87	6.19	4.86
1972	11,776	3,828	32.5	11,700	10,259	120,025	6.07	6.38	5.08
1973	11,622	3,872	33.3	11,413	10,119	115,491	7.14	7.42	6.20
1974	11,297	3,941	34.9	11,230	10,293	115,586	8.33	8.66	7.13
1975	11,220	4,087	36.4	11,143	10,350	115,334	8.75	9.02	7.63
1976	11,087	3,958	35.7	11,055	10,879	120,269	9.66	9.93	8.56
1977	11,035	3,888	35.2	10,974	11,181	122,698	9.72	9.96	8.70
1978 2/	10,939	3,896	35.6	10,848	11,240	121,928	10.58	10.79	9.68
1979 2/	10,853	3,936	36.3						

Year	Dairy ration cost		Milk cow cost		Grain and other concentrates fed to milk cows 3/			Dairy pasture feed condition, as percent of normal	Alfalfa hay prices	
	Value per 100 pounds	Milk-feed price ratio	Price received per head	Milk required to buy a cow	Total fed	Per cow	Per 100 pounds of milk produced		Received by farmers per ton	Paid by farmers per ton
	Dol.	Lb.	Dol.	Cwt.	Thou. tons	Lb.	Lb.	Pct.	Dol.	Dol.
1955	3.16	1.28	146	36	18,664	1,758	30.1	77	22.00	33.70
1960	2.92	1.45	223	53	19,821	2,259	32.2	82	21.00	31.60
1961	2.92	1.45	224	53	20,916	2,404	33.2	84	21.00	30.90
1962	2.95	1.40	221	54	21,617	2,533	34.3	80	21.40	30.60
1963	3.04	1.36	215	52	21,858	2,646	35.1	73	23.50	32.90
1964	3.03	1.38	209	50	22,464	2,800	35.9	73	24.00	32.60
1965	3.03	1.40	212	50	22,827	2,953	36.7	80	24.00	33.00
1966	3.15	1.53	246	51	22,569	3,000	37.6	78	24.70	33.40
1967	3.23	1.56	260	52	22,790	3,374	38.3	80	23.60	34.08
1968	3.10	1.70	274	52	22,886	3,519	39.1	83	23.00	32.94
1969	3.15	1.75	300	55	23,615	3,726	40.7	82	23.90	34.08
1970	3.28	1.74	332	58	24,870	3,979	42.4	81	24.70	34.69
1971	3.44	1.71	358	61	25,107	4,070	42.4	79	27.10	37.57
1972	3.52	1.73	397	65	25,162	4,298	41.9	80	31.45	40.15
1973	4.88	1.46	496	69	25,042	4,389	43.4	83	41.55	51.65
1974	6.23	1.34	500	60	24,586	4,384	42.6	75	52.58	63.58
1975	6.25	1.40	412	47	24,274	4,357	42.1	79	54.38	66.18
1976	6.31	1.53	477	49	25,083	4,545	41.7	79	60.81	72.16
1977	6.21	1.57	478	49	25,843	4,709	42.1	72	60.57	74.25
1978 3/	6.13	1.73	624	59	---	---	---	77	52.18	4/

1/ Prior to 1965, estimated by Livestock Section, ERS.
2/ Preliminary or estimated.
3/ On farms where milk or cream was sold. Beginning 1966, data are for all farms where milk was produced.
4/ Discontinued series.

Milk cows and replacements, 1976-79

Date	Milk cows	Replacement heifers, 500 pounds and over	
		Number	Per 100 cows
	1,000		*Number*
1976			
January 1	11,087	3,958	35.7
July 1	11,058	3,942	35.6
1977			
January 1	11,035	3,888	35.2
July 1	10,977	4,005	36.5
1978			
January 1	10,939	3,896	35.6
July 1	10,823	3,957	36.6
1979			
January 1	10,853	3,936	36.3

percent from a year earlier (table 4). The year-to-year decline was similar to 1975 and 1977 but slower than 1976 and 1978.

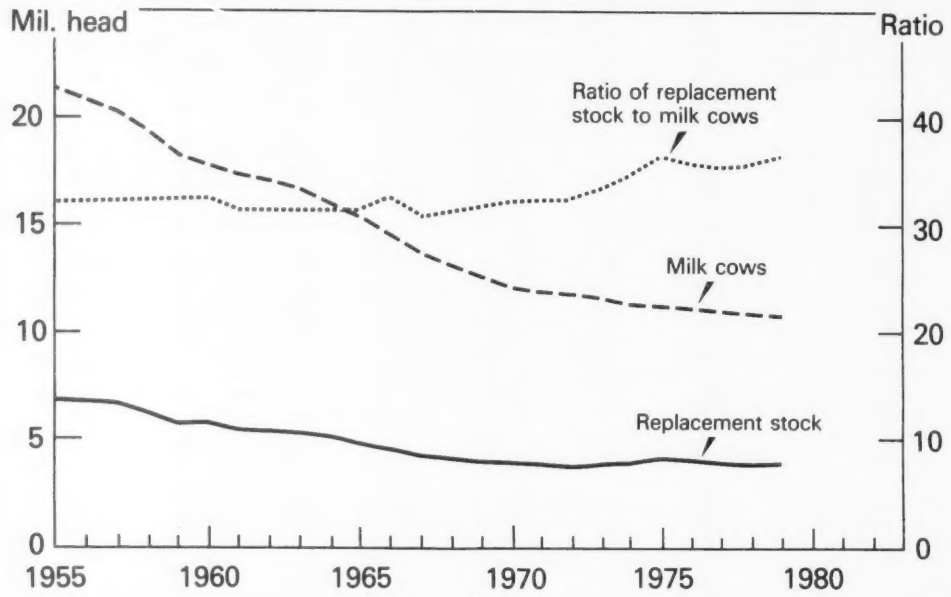
Only 9 States had more milk cows on January 1 than a year earlier. Of the 5 major dairy States, the only increase was the 2-percent rise in California, but only New York reported a decrease. The Mountain and Pacific regions had significantly more cows, the Lake States had about the same number, and other regions had 1 to 3 percent fewer.

In 1978, there were about 380,000 operations with milk cows, almost 6 percent fewer than a year earlier. Operations with less than 30 cows accounted for 65 percent of all operations and almost all of the year-to-year decline. This group held only 16 percent of the milk cow inventory and the proportion of market supplies of milk accounted for by this group would be even smaller. Many of these operations do not market a significant proportion of their output and many others are characterized by low levels of output per cow. At the other end, only 17 percent of the operations had 50 or more milk cows, but this group held 60 percent of the total milk cows. Between 1977 and 1978, this group increased both in number of operations and in total number of cows.

Feed Prices Stable

Feed prices thus far in 1979 have been fairly stable at moderate levels. In late February, No. 2 corn in Chicago was quoted at about $2.35 to $2.40 per bushel, up 15 to 20 cents from a year ago. Mean-

Milk Cows and Replacement Stock*



*January inventory of milk cows and dairy heifers over 500 pounds.

USDA

Figure 7

Neg. ESCS 1008-79(3)

Table 5—Milk-feed price ratio by months, 1970-78[1]

Month	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
	Pounds									
January	1.58	1.48	1.57	1.31	1.32	1.14	1.49	1.31	1.50	1.61
February	1.54	1.49	1.59	1.32	1.34	1.22	1.44	1.26	1.52	1.59
March	1.54	1.46	1.54	1.30	1.36	1.26	1.43	1.28	1.51	
April	1.52	1.43	1.50	1.31	1.38	1.22	1.39	1.28	1.47	
May	1.49	1.40	1.48	1.22	1.32	1.22	1.35	1.23	1.47	
June	1.47	1.38	1.47	1.14	1.25	1.23	1.28	1.26	1.43	
July	1.50	1.43	1.49	1.19	1.21	1.27	1.30	1.35	1.45	
August	1.51	1.46	1.52	1.14	1.02	1.28	1.34	1.46	1.54	
September	1.53	1.55	1.53	1.31	1.09	1.37	1.34	1.56	1.59	
October	1.56	1.62	1.56	1.35	1.11	1.43	1.37	1.62	1.64	
November	1.58	1.63	1.53	1.40	1.12	1.50	1.38	1.58	1.62	
December	1.54	1.60	1.41	1.33	1.11	1.54	1.34	1.51	1.63	
Average	1.53	1.49	1.52	1.28	1.22	1.31	1.37	1.39	1.53	

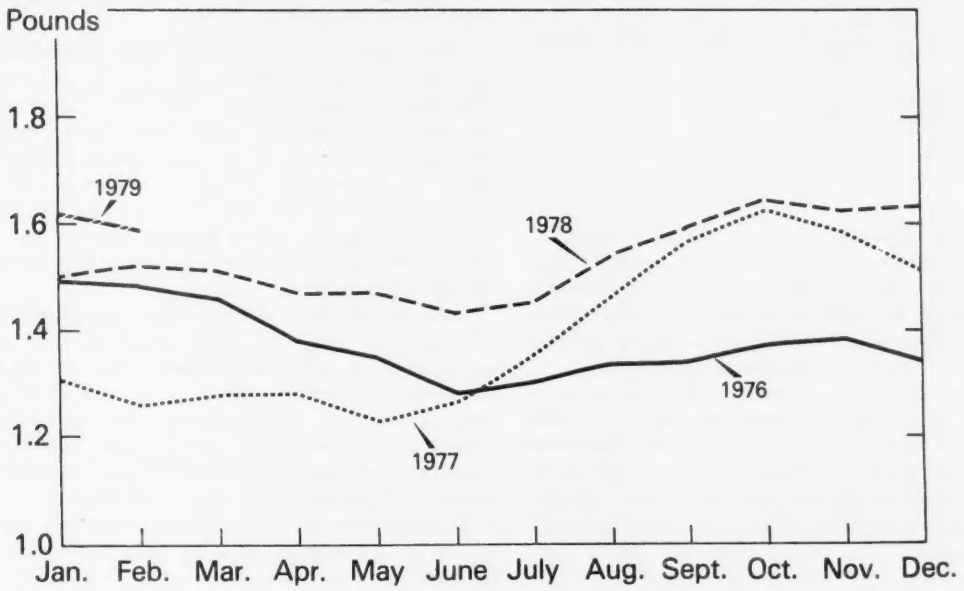
[1] Pounds of 16% protein ration equal in value to 1 pound of milk.

while, the price of 44-percent soybean meal in Decatur was about $195 to $200 per ton, $45 to $50 higher than a year earlier. It required about 2.3 pounds of corn to equal the value of a pound of soybean meal, much higher than the traditional 1.6 pounds.

The price of 16-percent dairy ration averaged $150 per ton in February, up $16 from a year earlier and $12 since last October. Alfalfa hay prices were just barely below a year earlier and the lowest since 1975.

Milk-feed price relationships have been quite favorable. The milk-feed price ratio stood at about 1.6 in February, about the same as last fall but up from around 1.5 a year earlier (table 5 and figure 8).

The milk-feed ratio now being published is not comparable to the ratio formerly published. The



*Pound of 16% protein ration equal in value to one pound of milk sold to plants and dealers.

USDA

Figure 8

Neg. ESCS 40-79(3)

new ratio is based on the price of 16-percent protein, commercial mixed feed. The earlier ratio used a calculated average ration value, based on a weighting of homegrown concentrates at local market prices and purchased feed ingredients and commercial mixed feeds at prices paid. While the new ratio understates the value of milk relative to average concentrate value, it probably will about as accurately reflect changes in the relationship of milk and feed prices.

PRICES AND INCOME

Milk Prices Stay Strong

Manufacturing grade milk prices have slipped just slightly from last fall's high levels and averaged $10.80 per 100 pounds in February. Adjusted for fat test, February prices averaged about 80 cents above the current support price and about

Milk prices received by farmers

Month	All sold to plants			Manufacturing grade		
	1977	1978	1979	1977	1978	1979
	Dollars per 100 pounds					
January ...	9.65	10.20	11.90	8.48	9.12	10.90
February ..	9.53	10.20	11.90	8.41	9.18	10.80
March	9.45	10.20		8.46	9.23	
April	9.44	10.10		8.66	9.28	
May	9.37	10.00		8.62	9.27	
June	9.40	10.00		8.56	9.23	
July	9.49	10.10		8.56	9.26	
August	9.66	10.50		8.64	9.58	
September .	9.97	10.90		8.84	9.92	
October ...	10.10	11.30		9.02	10.50	
November ..	10.20	11.60		9.11	10.70	
December ..	10.20	11.80		9.19	10.90	
Average ..	9.72	10.58		8.71	9.68	

equal to the expected support price on April 1. Anticipation of the support price adjustment was a factor, but the low commercial dairy stocks and strong demand for milk to be used in cheese probably were most important in holding prices relatively close to the December seasonal peak.

Farmers received an average all milk price of $11.90 per 100 pounds in February, up 17 percent from a year ago and equaling the later-than-normal seasonal peak in January. Class I prices in February, reflecting the December peak in the Minnesota-Wisconsin price, and the relatively small decline in the value of milk for manufacturing held the all milk price at a high level.

In 1978, farmers' milk prices averaged about $10.58, up about 9 percent from 1977. After running close to the support price during the first half of 1978, the combination of lower milk output, large gains in commercial use, and low commercial stocks brought prices up sharply during the second half. Manufacturing grade milk prices averaged $9.68 in 1978, up almost a dollar from 1977.

Minimum Class I prices in Federal order markets will average $12.65 per 100 pounds in March, down a nickel from February but up $1.64 from a year earlier.

During the last several months, increases in Class I prices announced by cooperatives generally have matched the increases in minimum Class I prices in Federal orders. Cooperatives in a number of markets announced 30-cents-per-hundredweight increases in December as minimum Federal order Class I prices increased 28 cents. Cooperatives announced another general price increase of 45 cents in February, corresponding with the 42-cent rise in Federal order minimums between December and February.

The estimated average over-order payment was 40 cents per 100 pounds during February. With a 5-cent drop in Federal order minimums for March, the average over-order payment is expected to increase slightly.

During the past 3 years, the annual average over-order payment has been very stable. These estimated payments averaged 34 cents, 36 cents, and 34 cents during 1976, 1977, and 1978, respectively.

Farm Prices To Hold Near Adjusted Support Price

Manufacturing grade milk prices probably will run close to the adjusted support price this spring. The April 1 adjustment (reflecting the estimated change in the index of prices paid since October 1) probably will add 75 to 85 cents to the current $9.64 (3.5 percent milkfat) support price. This would result in the price of all milk this spring averaging about 13 to 15 percent above a year earlier, following an increase of about 16 percent during the first quarter.

How much milk prices rise seasonally during the second half of 1979 will depend on the expansion in milk production, demand for dairy products, commercial stocks at the end of the flush season, and the support purchase and sell-back prices set on October 1. Unless new legislation is enacted, the minimum legal support level will revert to 75 percent of parity on October 1.

If milk production and commercial use develop as currently expected, dairy prices probably will move above support prices next summer. However, seasonal price increases probably will be smaller than in 1978, largely due to the expected larger commercial cheese stocks. For all of 1979, farm milk prices probably will average 10 to 14 percent

higher than in the past year.

With price support purchases expected to be close to 1978's moderate level, even slight deviations from the expected supply-demand conditions could substantially alter the expected price rises in the second half of 1979. Lower-than-expected milk output, stronger-than-expected commercial use, or slight complementary changes in both would result in another sharp rise in prices. Conversely, changes in the opposite direction would result in a large surplus and only a small seasonal price rise.

Higher Prices Boosted 1978 Cash Receipts

Cash receipts from farm marketings of milk and cream in 1978 are estimated at $12.7 billion, up 8 percent from 1977. The increase was due to higher milk prices as marketings declined just a bit. Over the past 3 years, cash receipts rose almost $2.8 billion.

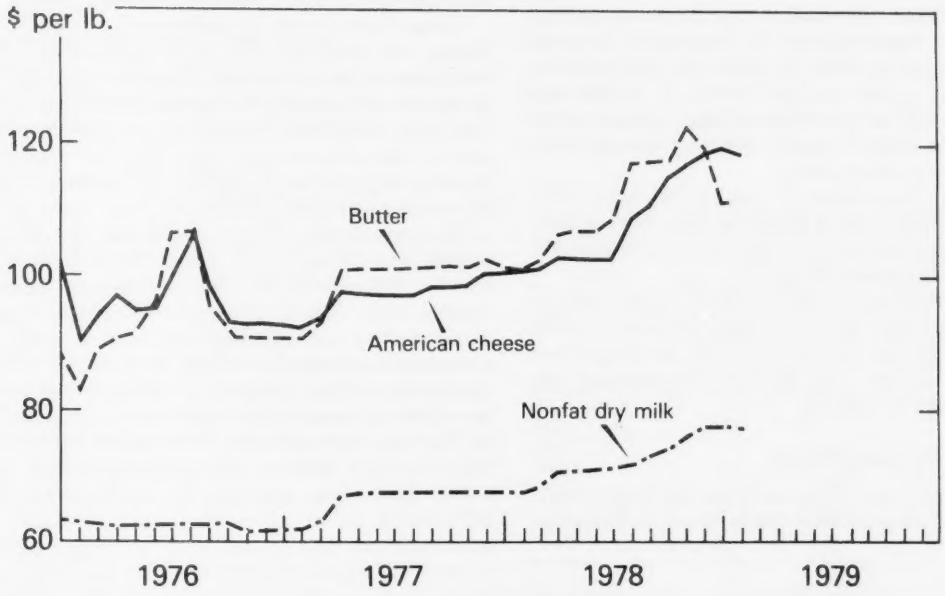
In 1978, the 9-percent rise in milk prices was just slightly more than the increase in the index of prices paid for production items. However, net incomes to dairy enterprises probably were significantly better than the previous year, since the index of prices paid for production items was boosted by sharp jumps in feeder livestock prices—which do not constitute a major cost to dairymen. Continued low feed prices have been an important factor in maintaining favorable incomes to dairy enterprises.

In early 1979, the year-to-year increase in milk prices easily surpassed the rise in prices of production items. Dairy income probably will compare favorably with a year earlier through at least the first half of 1979.

Wholesale Prices to Stabilize

Wholesale dairy product markets have been unsettled since late December. After dropping about 10 percent just before Christmas, exchange prices for butter fluctuated in a narrow range—during January-Feburary—leaving wholesale butter prices close to the support purchase price. In early March, butter prices regained about half of the late December drop. Nonfat dry milk prices did not peak until early January, when they reached just over 78 cents per pound (high heat, Central States area). Powder prices have eased about a penny a pound since then but were still more than 3 cents above the current support purchase price by late February (figure 9).

Wholesale Dairy Product Prices



USDA

Figure 9

Neg. ESCS 39-79(3)

Prices of American cheese in 40-pound blocks have stayed quite strong; by late February, they were still close to the seasonal peak and about 13 cents per pound above the support purchase price. Stocks of aged cheese reportedly were quite low this winter, which has held up the price of current block cheese. On the other hand, prices of barrel cheese had dropped almost 5 cents per pound by early March and the difference between barrel and block styles was very wide.

By late February, barrel cheese operations seemed to have a very slight advantage over butter-powder operations but block cheese production held a large advantage in competing for milk over either barrel cheese or butter-powder operations. Wholesale prices of the major dairy products probably will move into a more typical alignment in coming weeks.

By April, wholesale prices of butter and nonfat dry milk probably will be close to the new support purchase prices. Butter prices likely will edge upward during March while nonfat dry milk prices probably will hold fairly steady. Average barrel cheese prices this spring probably will run somewhat below the announced support purchase price because of the additional inspection and container costs associated with sales to CCC. Prices of block cheese will decline from current levels; however, it may be well into the flush season before they drop to the new support purchase price. Wholesale prices probably will be fairly stable this spring although seasonal rises could start as soon as early summer.

By late February, edible dry whey was selling for 10 cents a pound (nonhygroscopic, Central States area), down from 14 cents late last summer and 16 cents a year earlier. Increased cheese output, greater utilization of liquid whey, large stocks of dry whey, and sluggish whey demand have reduced whey product prices.

Wholesale ice cream prices in January were almost 12 percent above a year earlier. Meanwhile, prices of evaporated milk were quoted at about $17 per case, up 10 percent from a year ago.

The January index of wholesale dairy product prices, as reported by the Bureau of Labor Statistics (BLS), stood at 203.4 (1967=100), up 14 percent from a year earlier. The January year-to-year rise was the largest in 3 years.

Retail Prices Up Substantially

The strength in farm milk prices kept retail dairy prices rising substantially through January.

Retail dairy product prices

Item	Index base	Year 1977[1]	Jan. 1978	Year 1978	Jan. 1979
Consumer Price Index[2]	1967=100	181.5	187.2	195.4	204.7
All food[2]	1967=100	192.2	199.2	211.4	223.9
All dairy products[2]	1967=100	173.9	177.7	185.6	198.4
Fluid milk and cream	12/77=100	—	100.6	104.8	111.8
Whole milk	1967=100	162.3	164.8	171.7	183.5
Other	12/77=100	—	100.4	104.5	112.1
Manufactured dairy products	12/77=100	—	100.3	105.0	112.7
Butter	1967=100	161.8	169.6	179.4	195.8
Cheese	12/77=100	—	100.5	104.8	112.9
Frozen desserts	12/77=100	—	99.4	104.7	111.8
Other	12/77=100	—	100.2	104.4	110.1

[1] May not be completely comparable. [2] For all urban consumers starting January 1978.

The BLS index stood at 198.4 (1967=100) in January, up almost 12 percent from a year earlier, and similar to the rise in all food prices. In 1978, the year-to-year increase in dairy prices trailed the rise in all food prices.

In January, rises in retail prices of manufactured dairy products slowed slightly from the last 4 months of 1978 (figure 10), but higher ice cream and cheese prices kept the increase substantial. Retail prices of fluid milk products also continued to climb, partially reflecting the lag between changes in value of milk for manufacturing and changes in Class I prices.

Retail dairy prices probably will continue to rise during the first half, but at a slower rate than in recent months or during the first half of 1978. Increases will accelerate seasonally during the second half of 1979 but probably will not match the rate of the second half of 1978. For all of 1979, retail dairy prices probably will average 8 to 11 percent higher than in 1978.

The retail cost of dairy products rose almost 7 percent in 1978, up substantially from the 3 percent rise in 1977. About two-thirds of the increase was due to higher farm milk prices as the farm-retail differential increased less than 5 percent. The farm-retail spread was only 2 percent above a year earlier in the first quarter of the year, but rises of more than 5 percent were sustained during the rest of the year, even though farm prices rose rapidly. The farmer's share of the consumer dollar rose a penny last year, up from the typical 50 cents of 1977.

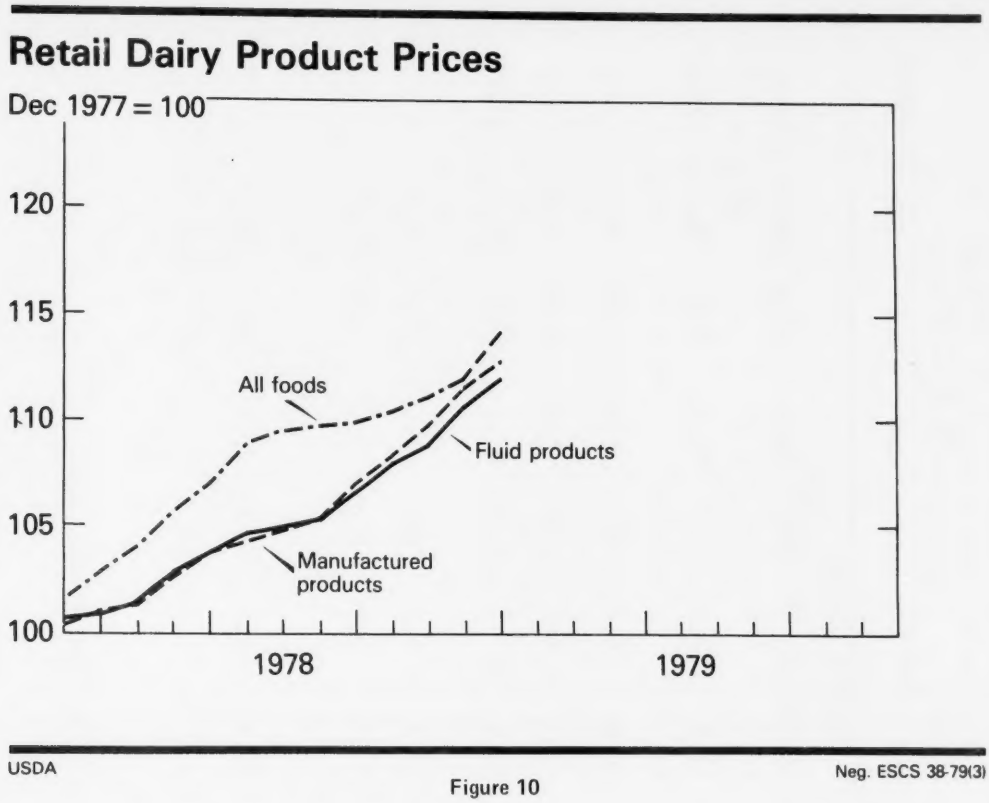


Figure 10

UTILIZATION

Manufactured Product Output Down

In December-January, 2½ percent less milk was used in manufactured products than a year earlier as butter production continued well below year-earlier levels.

Butter output in January was down 10 percent from a year earlier, while nonfat dry milk production was down 31 percent. Preliminary estimates of February butter output indicate a similar drop from last year.

American cheese output in January was up 6 percent from last year and preliminary estimates indicate continued heavy production in February in an effort to meet expected strong sales and permit rebuilding of commercial stocks. Production of other cheese types in January posted an increase of 4 percent from a year ago.

Manufactured dairy products used about 66 billion pounds of milk in 1978, down almost 1½ percent from 1977. Most of the decline was reflected in the 8-percent drop in butter output (table 6).

Cheese output used about 1 billion pounds more milk last year, as production of both American cheese and other-than-American varieties increased. Less milk was used in canned milk and cottage cheese production, while more was used in production of dry whole milk and frozen dairy products.

In coming months, the amount of milk used in manufacturing probably will move above a year

Wisconsin out-of-state milk shipments

Month	1978		1979	
	Loads	Volume	Loads	Volume
	Number	*Thousand pounds*	*Number*	*Thousand pounds*
January	206	9,682	302	14,194
February	314	14,758	180	8,460
March	239	11,233		
April	183	8,601		
May	154	7,238		
June	57	2,679		
July	121	5,687		
August	119	5,593		
September	475	22,325		
October	191	8,977		
November	276	12,972		
December	320	15,040		
Total	2,655	124,785		

Table 7--Commercial disappearance: Total milk, annual and by quarters, 1976-78 1/

Item	1976	1977					1978 2/				
		By quarters				Annual	By quarters				Annual
		1st	2nd	3rd	4th		1st	2nd	3rd	4th	
	Billion pounds										
Production	120.3	29.8	33.1	30.9	29.0	122.7	29.8	32.7	30.5	29.0	121.9
Farm use	3.0	.7	.7	.7	.7	2.8	.7	.7	.7	.7	2.7
Marketings	117.3	29.1	32.4	30.2	28.3	119.9	29.1	32.0	29.8	28.3	119.2
Beginning commercial stocks	3.7	5.3	5.5	7.1	6.0	5.3	4.9	4.8	5.6	5.2	4.9
Imports	1.9	.5	.4	.4	.7	2.0	.5	.4	.5	.9	2.3
Total supply	123.0	34.9	38.3	37.7	35.0	127.1	34.5	37.2	35.9	34.4	126.4
Ending commercial stocks	5.3	5.5	7.1	6.0	4.9	4.9	4.8	5.6	5.2	4.5	4.5
Net removals	1.2	2.1	2.6	1.1	.3	6.1	1.2	1.9	-.1	-.2	2.7
Commercial disappearance											
Actual	116.4	27.2	28.6	30.6	29.8	116.1	28.6	29.7	30.8	30.1	119.2
Percent change 3/	+2.4	4/-3.0	-3.6	+3.2	+3.5	-.2	+5.2	+3.9	+.7	+1.1	+2.6

1/ Milk equivalent, fat solids basis. Totals may not add due to rounding.
2/ Preliminary.
3/ From year earlier using unrounded data.
4/ On a daily average basis.

Table 8--Commercial disappearance: Selected dairy products, United States, annual 1969-78, by quarters, 1977-78

Year and quarter	Butter 1/	Cheese		Nonfat dry milk	Canned milk	Frozen products 3/
		American 2/	Other			
	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. gal.
1969	921.9	1,281.0	861.6	1,042.1	1,376.1	1,092.2
1970	898.2	1,398.0	909.1	983.2	1,213.8	1,097.3
1971	847.1	1,454.8	987.0	981.8	1,186.9	1,102.4
1972	885.4	1,595.7	1,127.8	919.2	1,102.6	1,108.6
1973	855.6	1,677.1	1,210.2	1,110.1	1,056.7	1,118.6
1974	929.9	1,780.6	1,276.5	809.9	999.5	1,128.0
1975	951.0	1,717.1	1,331.9	697.0	923.9	1,183.9
1976	919.0	1,920.9	1,458.0	719.2	899.0	1,154.0
1977	859.8	1,958.1	1,512.3	681.6	799.2	1,147.4
1978	908.2	2,084.1	1,633.0	666.8	765.4	1,159.6
1977 - 1st	208.7	464.8	347.1	202.5	203.9	246.0
2nd	166.1	482.5	369.6	127.8	183.0	327.3
3rd	233.5	486.1	377.2	185.6	183.7	342.3
4th	251.1	524.4	417.8	165.8	228.8	231.9
1978 - 1st	237.3	530.1	386.3	182.4	194.7	243.7
2nd	205.6	520.4	385.9	134.3	176.6	329.5
3rd	227.0	507.8	398.4	196.6	162.3	345.6
4th	238.3	525.7	462.5	153.6	231.7	240.8
1977-78 percent change						
	Percent					
1st	+13.7	+14.0	+11.3	-9.9	-4.5	-.9
2nd	+23.8	+7.8	+4.4	+5.1	-3.5	+.7
3rd	-2.8	+4.5	+5.6	+5.9	-11.6	+1.0
4th	-5.1	+.2	+10.7	-7.4	+1.3	+3.8

1/ Imports include butter equivalent of butteroil. 2/ Imports include Colby cheese; stocks do not include processed cheese. 3/ Excludes Mellorine.

Table 6— Production of selected manufactured dairy products, 1976-78

Item	1976	1977	1978[1]	Change from year earlier	
				1977	1978
	Million pounds			*Percent*	
Butter	978.6	1,085.6	999.0	+10.9	-8.0
Cheese:					
American	2,048.8	2,042.4	2,093.6	-.3	+2.5
Other	1,271.4	1,315.5	1,423.0	+3.5	+8.2
Creamed cottage	874.6	877.6	875.0	+.3	-.3
Canned milk	932.1	818.9	777.2	-12.1	-5.1
Dry whole milk	78.1	69.4	72.8	-11.1	+4.9
Ice cream (mil. gal.)	818.2	804.1	816.4	-1.7	+1.5
Milk equivalent[2]	64,673	66,863	66,000	+3.4	-1.3
Nonfat dry milk	926.2	1,106.0	928.8	+19.4	-16.0

[1] Preliminary. [2] Total all manufactured products.

ago, with cheese continuing to absorb much of the increased milk supplies. However, the diversion of milk from butter-powder to American cheese production may slow in coming months.

1979 Growth in Commercial Use May Be Slow

Following last year's sharp rise to record levels, commercial use this year probably will expand, but more slowly than the trend rate of about 1 percent. While growth in consumer incomes is expected to keep demand strong, rises in retail dairy prices, unlike 1978, probably will match or slightly exceed increases in all food prices.

In 1979, commercial use of butter could decline slightly from the strong 1978 levels, while gains in commercial use of cheese likely will be smaller than the trend increases of recent years. Fluid milk sales could again hold steady.

Led by large jumps in sales of cheese and butter, commercial disappearance of milk and dairy products in 1978 rose 3 billion pounds to over 119 billion pounds milk equivalent, about 2½ percent larger than the previous record of 1976 and the near-record of 1977 (table 7). Greater consumer purchasing power and higher retail prices for meat and other foods generated strong demand for dairy products (table 9).

Changes in dairy sales from year earlier

Item	1977	1978
	Percent	
Total milk[1]	-.2	+2.6
Manufactured products:		
American cheese	+1.9	+6.4
Other cheese	+3.7	+8.0
Cottage cheese[2]	+.7	+.9
Butter	-6.4	+5.6
Ice cream	-1.7	+1.5
Ice milk	+2.5	+.4
Canned milk	-11.1	-4.2
Nonfat dry milk	-5.2	-2.2
Fluid products	-.1	+.2
Whole milk	-3.5	-2.2
Skim and lowfat milk	+7.0	+4.8
Cream and mixtures	+1.6	-1.5

[1] On a milk equivalent, fat-solids basis. [2] Creamed and low-fat.

Commercial use of butter in 1978 was up almost 6 percent from 1977 with large gains during the first half of the year more than outweighing declines during the second half. Conversely, nonfat dry milk use was down 1 percent from 1977 (table 8).

Commercial use of cheese in 1978 continued to increase substantially as American cheese use was up more than 6 percent and sales of other cheese varieties were up 8 percent.

Fluid milk sales in 1978 were just barely above 1977 levels. The trend toward smaller sales of whole milk and greater sales of lowfat and skim items continued (table 10).

Sales of cottage cheese were slightly larger than the previous year, while canned milk use continued its decline. Ice cream sales were up 2 percent, while sales of ice milk held steady.

Per Capita Use Lifted by Larger Sales

Per capita civilian consumption in 1978 rose almost 7 pounds to almost 558 pounds (milk equivalent, fat solids basis). Strong commercial use was responsible for the rise as donations slipped.

Americans consumed an average 20.4 pounds of milkfat last year, almost 2 percent more than 1977 and the highest since 1972. Greater use of butter and cheese outweighed the decline in milkfat consumed in fluid products. Per person use of milk solids-not-fat was about 1 percent higher in 1978, due mainly to larger cheese consumption (table 11).

Cheese consumption rose almost a pound per capita last year. The increase was evenly split between American and other cheese. Per capita

Table 9--Factors influencing and indicative of the demand for milk and dairy products, United States, selected years, 1960-78

Year	Total population July 1 (including Armed Forces overseas)	Total civilian employment	Per capita disposable income		Civilian per capita disappearance					Retail price indexes		
			Actual	Deflated by consumer price index 1/	Milk equivalent		Milk solids		Margarine	Consumer price	All foods	Dairy products
					Fat-solids basis	Calcium content basis	Milkfat	Solids-not-fat				
	--- Million ---		--- Dollars ---		---------- Pounds ----------					---- 1967=100 ----		
1960	180.7	65.8	1,934	2,180	653	512	24.5	41.4	9.4	88.7	88.0	88.4
1965	194.3	71.1	2,430	2,571	620	505	22.9	40.6	9.9	94.5	94.4	90.0
1966	196.6	72.9	2,597	2,672	604	503	22.3	40.3	10.5	97.2	99.1	95.8
1967	198.7	74.4	2,740	2,740	581	494	21.4	39.5	10.5	100.0	100.0	100.0
1968	200.7	75.9	2,930	2,812	577	499	21.2	39.7	10.8	104.2	103.6	103.3
1969	202.7	77.9	3,111	2,833	569	497	20.9	39.6	10.8	109.8	108.9	106.7
1970	204.9	78.6	3,348	2,879	562	486	20.6	39.8	11.0	116.3	114.9	111.8
1971	207.0	79.1	3,588	2,958	557	490	20.4	39.8	11.1	121.3	118.4	115.3
1972	208.8	81.7	3,837	3,062	561	479	20.6	39.6	11.3	125.3	123.5	117.1
1973	210.4	84.4	4,285	3,219	555	477	20.4	39.8	11.3	133.1	141.4	127.9
1974	211.9	85.9	4,646	3,146	544	471	20.0	38.2	11.3	147.7	161.7	151.9
1975	213.6	84.8	5,088	3,156	546	469	20.1	38.0	11.2	161.2	175.4	156.6
1976	215.1	87.5	5,504	3,228	548	486	20.1	38.7	12.2	170.5	180.8	169.3
1977	216.8	90.5	6,009	3,311	551	482	20.1	38.3	11.6	181.5	192.2	173.9
1978	218.5	94.4	6,641	3,399	558	488	20.4	38.5	N.A.	195.4	211.4	185.6

1/ 1967 dollars.
2/ Preliminary.
N.A.= Not available.

Table 10--Milk and dairy product sales (domestic disappearance, commercial sources) total and per capita, selected years, United States, 1970-78 1/

Year	Fluid milk product sales					Butter	Cheese			Evaporated and condensed	
	Fluid whole milk	Cream 2/	Low-fat milk 3/	Total product weight	Whole milk equivalent 4/		Whole and part skim milk 5/		Cottage cheese 6/	Whole milk	Skimmed milk
							American	Other			
	Total										
	Million pounds										
1970	42,956	1,067	10,289	54,312	51,998	902	1,393	892	1,060	1,349	1,016
1971	42,108	1,076	11,485	54,669	51,853	878	1,452	971	1,108	1,303	1,039
1972	41,851	1,093	12,826	55,770	53,227	861	1,573	1,110	1,133	1,236	980
1973	40,443	1,130	14,062	55,635	52,413	846	1,661	1,193	1,103	1,194	894
1974	38,358	1,143	14,815	54,316	50,514	917	1,771	1,267	992	1,154	732
1975	38,256	1,175	16,558	55,989	51,123	948	1,692	1,317	1,006	1,097	761
1976	37,061	1,189	17,710	55,960	51,505	932	1,912	1,446	1,025	1,046	785
1977 7/	35,750	1,208	18,944	55,902	51,389	860	1,911	1,493	1,032	925	869
1978 7/	34,950	1,190	19,850	55,990	50,600	899	2,070	1,605	1,041	929	850
	Per capita 8/										
	Pounds										
1970	214	5.3	51.3	271	259	4.4	6.8	4.4	5.2	6.6	5.0
1971	207	5.3	56.5	269	255	4.3	7.0	4.7	5.4	6.3	5.0
1972	204	5.3	62.5	272	259	4.1	7.6	5.3	5.4	5.9	4.7
1973	195	5.5	67.9	269	253	4.0	7.9	5.7	5.3	5.7	4.3
1974	184	5.5	70.9	260	242	4.3	8.4	6.0	4.7	5.5	3.5
1975	181	5.6	78.5	266	243	4.4	8.0	6.2	4.7	5.1	3.6
1976	174	5.6	83.3	263	242	4.3	8.9	6.7	4.8	4.9	3.6
1977 7/	167	5.6	88.4	261	240	4.0	8.8	6.9	4.8	4.3	4.0
1978 7/	162	5.5	91.8	259	234	4.1	9.5	7.4	4.8	4.3	3.9

Year	Frozen products					Dry products			
	Ice cream	Ice milk	Sherbet	Other	Mello-rine	Whole milk	Nonfat dry milk	Butter-milk	Whey 9/
	Total								
	Million pounds								
1970	3,656	1,577	318	40	249	43	960	51	294
1971	3,676	1,582	317	47	232	32	958	55	319
1972	3,685	1,599	325	53	218	24	853	48	377
1973	3,714	1,604	346	70	191	21	1,056	39	384
1974	3,753	1,629	325	56	166	15	839	44	453
1975	4,015	1,643	316	66	144	16	668	44	477
1976	3,928	1,574	322	64	112	33	743	38	527
1977 7/	3,860	1,613	325	71	90	34	697	57	530
1978 7/	3,919	1,620	317	65	88	55	643	47	558
	Per capita 8/								
	Pounds								
1970	17.9	7.7	1.6	0.2	1.2	0.2	4.7	0.3	1.5
1971	17.8	7.7	1.5	.2	1.1	.2	4.6	.3	1.6
1972	17.7	7.7	1.6	.3	1.0	.1	4.1	.2	1.8
1973	17.7	7.6	1.6	.3	.9	.1	5.0	.2	1.8
1974	17.8	7.7	1.5	.3	.8	.1	4.0	.2	2.1
1975	18.8	7.7	1.5	.3	.7	.1	3.1	.2	2.2
1976	18.3	7.3	1.5	.3	.5	.2	3.5	.2	2.5
1977 7/	17.8	7.5	1.5	.3	.4	.2	3.2	.3	2.5
1978 7/	18.0	7.4	1.5	.3	.4	.3	2.9	.2	2.6

1/ Excludes milk used on farms where produced and distribution from USDA supplies; includes sales to the Armed Services for use in the United States.
2/ Includes milk and cream mixtures.
3/ Includes skim milk, buttermilk, and flavored milk drinks.
4/ Fat solids basis.
5/ Excludes cottage cheese.
6/ Includes full-skim American.
7/ Preliminary or estimated.
8/ Based on resident population, except fluid milk product sales--based on estimated population using fluid products from purchased sources.
9/ Includes modified whey products starting 1975.

Table 11--Milk solids and selected dairy products: Supply and utilization, 1970-78

Year and item	Supply				Utilization					Ending stocks
	Beginning stocks	Production	Imports	Total supply	Foreign		Domestic		Total use 2/	
					Exports	Shipments 1/	Military	Civilian		
	Million pounds									
Milkfat										
1970	189	4,284	72	4,545	15	20	87	4,150	4,334	211
1971	211	4,344	52	4,607	93	21	74	4,174	4,422	185
1972	185	4,410	66	4,661	57	25	66	4,253	4,461	200
1973	200	4,225	150	4,575	24	24	46	4,255	4,388	187
1974	187	4,238	108	4,533	21	20	42	4,185	4,325	208
1975	208	4,238	65	4,511	21	17	39	4,239	4,374	137
1976	137	4,406	74	4,617	19	20	36	4,281	4,414	203
1977 3/	203	4,478	75	4,756	18	20	35	4,310	4,439	317
1978 3/	317	4,475	86	4,878	13	24	35	4,420	4,551	327
Solids-not-fat										
1970	343	10,063	82	10,488	438	42	116	8,020	10,231	257
1971	257	10,197	57	10,511	411	36	105	8,135	10,311	200
1972	200	10,334	67	10,601	332	53	94	8,173	10,439	162
1973	162	9,932	335	10,429	77	46	80	8,286	10,232	197
1974	197	9,940	216	10,353	77	42	70	8,010	9,901	452
1975	452	9,930	67	10,449	170	33	65	8,024	9,870	579
1976	579	10,343	76	10,998	178	37	63	8,246	10,365	633
1977 3/	633	10,540	81	11,254	201	38	64	8,253	10,433	821
1978 3/	821	10,486	94	11,401	293	39	66	8,328	10,684	717
Butter 4/										
1970	89	1,143	2	1,234	2	7	45	1,061	1,115	119
1971	119	1,147	2	1,268	93	6	32	1,040	1,171	97
1972	97	1,102	2	1,201	44	10	23	1,017	1,094	107
1973	107	919	56	1,082	4	13	9	999	1,025	7/57
1974	7/57	962	2	1,021	1	6	9	956	972	49
1975	49	984	2	1,035	1	2	9	1,012	1,024	11
1976	11	979	2	992	1	3	7	934	945	47
1977 3/	47	1,086	2	1,135	2	2	5	941	950	185
1978 3/	185	999	2	1,186	1	4	3	964	972	214
American cheese										
1970	265	1,428	16	1,709	4	12	8	1,431	1,455	254
1971	254	1,518	17	1,789	4	16	7	1,520	1,547	242
1972	242	1,652	15	1,909	4	17	5	1,614	1,640	269
1973	269	1,678	28	1,975	4	16	4	1,661	1,685	290
1974	290	1,862	112	2,264	5	24	3	1,811	1,843	421
1975	421	1,660	16	2,097	5	19	3	1,762	1,789	308
1976	308	2,049	14	2,371	6	16	4	1,933	1,900	471
1977 3/	471	2,042	16	2,529	7	12	7	2,021	2,106	423
1978 3/	423	2,094	18	2,535	4	12	9	2,131	2,190	345
Other cheese										
1970	52	773	145	970	3	5	6	886	900	70
1971	70	856	119	1,045	3	6	5	966	980	65
1972	65	952	164	1,181	3	6	5	1,105	1,119	62
1973	62	1,007	202	1,271	3	7	5	1,188	1,203	68
1974	68	1,075	204	1,347	3	4	7	1,260	1,274	73
1975	73	1,151	163	1,387	4	5	7	1,310	1,326	61
1976	61	1,272	193	1,526	3	10	3	1,443	1,459	67
1977 3/	67	1,315	194	1,576	3	16	2	1,491	1,512	64
1978 3/	64	1,423	224	1,711	6	22	2	1,603	1,647	64
Evaporated and condensed milk 5/										
1970	150	1,514	3	1,667	50	63	6	1,432	1,551	116
1971	116	1,492	3	1,611	68	56	5	1,393	1,522	89
1972	89	1,435	2	1,526	55	72	5	1,313	1,445	81
1973	81	1,338	3	1,422	43	58	4	1,248	1,353	69
1974	69	1,285	3	1,357	43	58	2	1,175	1,278	79
1975	79	1,218	1	1,298	54	64	2	1,119	1,239	59
1976	59	1,203	1	1,263	49	76	0	1,067	1,192	71
1977 3/	71	1,049	1	1,121	34	62	1	949	1,046	75
1978 3/	75	8/1,057	1	8/1,133	37	81	2	8/943	8/1,063	70
Nonfat dry milk 6/										
1970	222	1,444	2	1,668	416	16	7	1,079	1,530	138
1971	138	1,418	2	1,558	358	17	5	1,085	1,468	90
1972	90	1,223	2	1,315	282	23	5	955	1,270	45
1973	45	917	267	1,229	18	19	1	1,113	1,154	75
1974	75	1,020	115	1,210	9	18	1	884	916	294
1975	294	1,001	2	1,297	113	6	1	703	828	469
1976	469	926	2	1,397	126	8	0	764	911	486
1977 3/	486	1,106	2	1,594	156	8	0	728	916	678
1978 3/	678	929	2	1,609	267	9	1	692	1,024	585

1/ To U.S. territories.
2/ Includes fed to animals or wasted where applicable.
3/ Preliminary.
4/ Includes butter equivalent of butteroil.
5/ Unskimmed includes both bulk and case goods.
6/ Human food only.
7/ Includes an estimated 10 million pounds of imported butter.
8/ Estimated.

Per capita civilian consumption

Item	1976	1977	1978	1977-78 change
	Pounds			*Percent*
Products:				
Butter	4.4	4.4	4.5	+2.3
Cheese	15.8	16.4	17.3	+5.5
Cottage cheese	4.8	4.8	4.8	0
Ice cream	18.1	17.7	17.8	+.6
Ice milk	7.4	7.5	7.5	0
Nonfat dry milk	3.6	3.4	3.2	-5.9
Canned milk	3.7	3.3	3.1	-6.1
Fluid milk:	177.8	169.8	158.7	-6.5
Whole	83.1	88.2	91.7	+4.0
Lowfat and skim	5.6	5.6	5.5	-1.8
Cream and mixtures				
Milkfat	20.1	20.1	20.4	+1.5
Milk solids-not-fat	38.7	38.3	38.5	+.5

butter use was 4.5 pounds last year, up 2 percent from a year earlier. However, nonfat dry milk consumption slipped a bit.

Among other products, per person use of lowfat fluid milk, ice cream, and lowfat cottage cheese was greater but per capita consumption of fluid whole milk, cottage cheese, canned milk, and ice milk was smaller.

Per capita consumption this year is expected to total slightly lower to about the same as 1978. Growth in total dairy sales may not quite keep pace with population growth.

Commercial Stocks Small

Commercial stocks of both milkfat and milk solids-not-fat remained low on February 1. Holdings of milkfat were 12 percent less and solids-not-fat stocks were 12 percent less than the moderate levels of a year earlier. During January, industry stocks of milkfat rose slightly while solids-not-fat holdings slipped.

Commercial stocks of American cheese on February 1 were 3 percent smaller than a year earlier and have contributed substantially to the strength in wholesale cheese prices. A year ago, the industry was starting to adjust stocks to minimal seasonal levels because of the expected heavy surplus during the flush. Stocks of other cheese varieties on February 1, 1979 were somewhat larger than a year earlier.

Dairy product stocks

Item	Feb. 1, 1977	Feb. 1, 1978	Feb. 1, 1979
	Million pounds		
Commercial:			
Butter	30.7	50.0	22.2
American cheese	411.3	357.1	345.5
Other cheese	68.7	65.4	75.8
Nonfat dry milk	465.4	689.3	559.1
Milkfat	186.6	182.0	159.4
Solids-not-fat	253.9	202.8	178.3
Milk equivalent	5,382	5,174	4,562
Government:			
Butter	37.0	145.8	185.2
American cheese	5.8	56.5	19.7
Nonfat dry milk	373.8	628.0	523.0
Milkfat	31.6	135.5	155.4
Solids-not-fat	361.4	621.5	509.2
Milk equivalent	819	3,568	4,019

Commercial butter stocks on February 1 were down more than a half from a year earlier, although they were up slightly from the start of the year. Manufacturers' stocks of nonfat dry milk were 41 percent less than a year earlier and the lowest since 1973. These low stocks were, to a large extent, responsible for the late seasonal peak in powder prices and the subsequent price strength.

Manufacturers' holdings of canned milk were about the same as a year earlier, while dry whole milk holdings were lower. The only dairy product in a burdensome stock situation was dry whey, where manufacturers' stocks were almost double a year earlier.

Seasonal rebuilding of the current low commercial stocks will be an important demand element in coming months and will help trim price support purchases. By early summer, commercial stocks probably will be larger than a year earlier. Last year, low stocks going into the flush, weak milk output, and strong sales limited early summer stocks (table 12). The degree to which dairy products are held in stocks this spring instead of sold to USDA will have a strong bearing on the pattern and magnitude of seasonal price rises during the second half of 1979.

Small Purchases of Butter and Powder Made

Despite wholesale prices near the support purchase prices, USDA purchased only small amounts of butter under the price support program in the first 2 months of 1979. The 12 million pounds of butter bought in January-February just slightly outweighed the sales made in the last quarter of 1978, and were only a fourth as large as a year earlier. No cheese has been purchased thus far in 1979.

Since wholesale prices generally have remained above the support purchase price, only tiny amounts of nonfat dry milk have been purchased. The less than 5 million pounds removed during January-February compared with almost 52 million pounds a year earlier.

The milk equivalent of CCC removals during January-February was about 0.2 billion pounds, less than a fourth of the year-earlier level. Purchases probably will be insignificant until the April 1 adjustment in support purchase prices.

With the expected expansion in milk output and

Table 12--Stocks of dairy products, United States, end of year or month, 1965-78

Year and month	Commercial stocks					Government stocks				Total milk equivalent 3/
	Butter	American cheese	Other cheese	Canned milk	Nonfat dry milk	Butter 1/	American cheese 2/	Nonfat dry milk	Evaporated milk	
	Million pounds									
1965	27.1	270.2	37.6	140.7	58.2	25.0	0.3	96.2	---	4,458
1966	30.2	322.1	50.4	204.5	118.2	2.1	.2	---	---	4,858
1967	18.4	302.3	46.2	196.0	98.7	150.2	80.8	157.6	---	8,252
1968	14.5	291.1	62.3	101.3	79.0	102.9	51.6	198.7	5.6	6,634
1969	25.1	264.4	52.1	106.9	83.9	63.6	1.1	137.8	42.9	5,245
1970	19.7	252.7	70.5	115.7	95.3	99.1	1.3	42.6	.1	5,803
1971	26.2	235.6	65.4	88.6	77.0	70.7	6.1	12.5	.2	5,104
1972	11.1	269.3	62.0	74.7	37.9	96.4	.2	6.9	5.8	5,498
1973	33.5	289.9	67.5	69.2	74.5	22.8	.4	.1	4/	5,207
1974	34.7	419.8	73.1	79.2	134.6	14.5	1.1	158.6	4/	5,886
1975	5.8	305.7	60.8	58.6	47.1	5.0	2.0	421.8	4/	3,844
1976	28.0	409.8	67.1	70.7	98.8	19.1	1.6	386.6	.1	5,708
1977										
Mar.	44.9	400.5	64.4	63.0	78.1	61.5	20.9	386.5	4/	6,992
June	70.3	482.0	73.2	127.7	128.7	126.8	32.1	452.1	4/	9,992
Sept.	42.1	436.8	70.6	148.6	81.7	161.2	62.4	597.3	4/	9,972
Dec.	34.2	361.5	64.0	75.2	60.7	150.7	60.5	617.2	4/	8,626
1978 5/										
Mar.	45.4	333.9	65.7	52.1	49.8	190.2	40.9	612.3	4/	9,171
June	40.3	403.2	76.9	101.4	95.0	240.6	41.7	607.0	.1	11,004
Sept.	28.1	382.3	79.4	136.0	63.6	238.5	50.2	617.4	4/	10,662
Dec.	15.2	349.1	78.4	70.3	40.1	191.8	29.8	545.0	4/	8,730

1/ Includes butter equivalent of butteroil and ghee, 1965. 2/ Includes process cheese held by USDA beginning May 1967. 3/ Includes manufactured products for which current monthly series are available (excludes nonfat dry milk). Excludes cream and bulk condensed milk beginning 1968. 4/ Less than 50,000 pounds. 5/ Preliminary.

Table 13--Dairy products removed from the commercial market by programs of the United States Department of Agriculture, 1949-78

Year and month	Removals 1/					Solids content of removals			
	Butter 2/	American cheese 3/	Evaporated milk 4/	Nonfat dry milk 5/	Milk equivalent	Milkfat	Solids-not-fat	As a percentage of marketings: Milkfat	As a percentage of marketings: Solids-not-fat
	Million pounds							Percent	
1949	111.7	25.5	---	325.5	2,489	100.4	321.1	2.6	4.6
1950	14.6	83.2	---	327.2	1,126	40.9	339.9	1.1	4.9
1951	-27.3	-7.1	---	35.3	-618	-24.0	31.5	---	.5
1952	16.1	1.7	---	42.3	339	13.8	41.2	.4	.6
1953	355.2	302.5	---	597.1	10,200	387.5	668.9	9.7	8.6
1954	305.1	242.5	---	644.4	8,588	328.2	695.5	8.0	8.7
1955	162.0	141.3	---	534.7	4,685	179.6	558.0	4.3	6.8
1956	164.6	186.5	---	723.4	5,206	197.6	753.0	4.7	8.7
1957	172.5	240.6	---	825.2	5,870	222.1	867.5	5.2	9.8
1958	183.7	75.0	---	886.0	4,658	178.2	875.0	4.2	9.8
1959	123.7	57.2	---	830.3	3,214	123.8	815.6	2.9	9.1
1960	144.8	.3	---	852.8	3,101	122.6	819.8	2.9	8.9
1961	329.4	100.0	---	1,085.6	8,019	305.0	1,075.3	6.9	11.2
1962	402.7	212.9	---	1,386.1	10,724	402.4	1,399.0	9.1	14.3
1963	307.5	110.9	---	1,219.2	7,745	291.8	1,210.1	6.7	12.4
1964	295.7	128.5	---	1,168.8	7,676	287.6	1,166.9	6.5	11.6
1965	241.0	48.6	---	1,098.4	5,665	217.4	1,074.0	5.0	10.8
1966	25.1	10.8	---	365.8	645	26.2	355.5	.6	3.7
1967	265.1	180.5	---	687.0	7,427	276.3	719.1	6.6	7.5
1968	194.8	87.5	54.9	557.8	5,159	193.2	575.4	4.7	6.0
1969	187.9	27.7	107.5	407.2	4,479	171.6	421.5	4.2	4.4
1970	246.4	48.9	48.4	451.6	5,774	221.1	460.7	5.3	4.8
1971	292.2	90.7	111.4	456.2	6/7,268	6/276.5	6/490.1	6.6	5.0
1972	233.7	30.4	97.0	345.0	6/5,345	6/208.4	6/362.0	4.9	3.6
1973	97.7	3.2	53.7	36.8	6/2,185	6/ 84.9	6/ 49.0	2.1	.5
1974	32.7	60.3	28.3	265.0	6/1,346	6/ 50.4	6/280.2	1.2	2.9
1975	63.4	68.2	24.5	394.5	2,036	77.7	405.6	1.9	4.2
1976	39.4	38.0	21.8	157.1	1,236	46.8	167.2	1.1	1.7
1977	221.8	148.2	15.9	461.7	6,080	230.8	494.9	5.3	4.8
1978 7/									
Jan.	26.0	1.4	1.6	29.1	554	21.7	29.0		
Feb.	26.7	.3	1.3	22.6	557	21.9	22.3		
Mar.	2.1	-.4	1.3	12.1	43	1.8	11.8		
Apr.	24.4	1.8	1.9	27.6	525	20.6	27.7		
May	34.6	6.0	1.2	51.5	777	30.2	52.0		
June	20.6	13.6	1.1	54.0	562	21.4	56.5		
July	8/	13.6	1.9	46.3	138	4.9	49.1		
Aug.	-6.0	3.5	1.5	18.8	-86	-3.4	19.4		
Sept.	-6.3	---	1.1	7.7	-127	-5.0	7.5		
Oct.	---	---	1.8	6.9	4	.2	7.0		
Nov.	-7.0	---	1.5	4.9	-142	-5.4	4.9		
Dec.	-3.1	---	1.3	3.4	-62	-2.2	3.5		
Total*	112.0	39.7	17.6	285.0	2,743	106.3	290.7	2.4	2.8

1/ Delivery basis, after unrestricted domestic sales.
2/ Includes butter equivalent of anhydrous milkfat, PIK, and purchases under Sec. 709, and 4a.
3/ Includes purchases under Sec. 709, and 4a.
4/ Includes purchases under 4a.
5/ Includes PIK certificates issues, and purchases under Sec. 709 and 4a.
6/ Includes dry whole milk purchases beginning November, 1971.
7/ Preliminary.
8/ Less than 50,000 pounds.
* Totals may not add due to rounding.

USDA dairy purchases[1]

Item	January-February		
	1978	1979	Change
	Million pounds		*Percent*
Butter	52.7	11.7	-77.8
American cheese	1.7	-.3	*
Nonfat dry milk	51.7	4.6	-91.1
Evaporated milk	2.8	3.0	+7.1
Milk equivalent	1,111	239	-78.5

[1] Deliveries minus unrestricted sales.

relatively slow growth in commercial use, USDA purchases could run above a year earlier this spring. However, removals for all of 1979 probably will total somewhat less to about the same as last year.

CCC removed from the market the equivalent of 2.7 billion pounds of milk in 1978, down 55 percent from 1977 (table 13). Sales of 22 million pounds of butter during the second half of 1978 brought net removals to 112 million pounds, about half of the large 1977 total. Proportionally more nonfat dry milk than butter was purchased but CCC bought 38 percent less nonfat dry milk than the prior year. The 40 million pounds of American cheese bought last year were little more than a fourth as large as the 1977 purchases. Canned milk purchases were slightly higher.

Uncommitted CCC inventories of both butter and nonfat dry milk on March 1 were well below a year earlier. Inventories of butter were down a fifth while nonfat dry milk holdings were down more than a fourth. Although substantially smaller than a year ago, uncommitted inventories of these 2 products still represented more than 1½ year's donation usage at current rates.

Uncommitted CCC stocks

Item	March 1	
	1978	1979
	Million pounds	
Butter	201.6	160.6
American cheese	36.6	.2
Nonfat dry milk	649.2	476.5

Federal Order Summary—1978[1]

Almost 119,400 producers delivered 78.1 billion pounds of milk—approximately 66 percent of the total milk marketed in the United States—to handlers regulated under the 47 Federal milk orders during 1978. Producer deliveries at Federal order plants during the year rose only 0.2 percent above the previous year. Average daily deliveries per producer averaged 1,792 pounds during 1978, an increase of 3 percent over the previous year and enough to more than offset a decline of more than 3,300 producers.

In 46 Federal order markets where comparable data were available, producer deliveries were unchanged from a year earlier. Producer milk used in Class I in the 46 comparable markets was also unchanged, therefore, the Class I utilization percentage was again 53 percent, the same as last year.

Producer blend prices during 1978 averaged $10.57 per 100 pounds, up 87 cents from the previous year. The rise reflected increases in the Minnesota-Wisconsin (M-W) price, which is the mover of minimum class prices in all Federal orders. Minimum Class I prices in Federal order markets, based on the M-W price for the second preceding month, averaged $11.41 per 100 pounds during 1978, 86 cents above 1977.

Sales of lowfat and skim milk items increased again in 1978 as the longtime trend towards products containing lower butterfat continued. During the past 4 years, however, the rate of increase in sales of such items has slackened and sales in 1978 were only 4.6 percent greater than in 1977. During 1978, lowfat and skim milk items accounted for more than 38 percent of the total sales of fluid milk in comparable Federal marketing areas. Ten years ago, lowfat and skim milk items accounted for only 17 percent of total fluid sales; and 15 years ago, less than 10 percent.

Proposed New Order. The Department held a hearing in December 1978 to consider a proposed milk order that would regulate the handling of milk in Southwestern Idaho and Eastern Oregon. Dairy farmer cooperatives in that area have proposed an order that would cover 18 southwestern Idaho and five eastern Oregon counties. A recommended decision on the proposal is expected later this year. The proposed order would cover about 225 producers and around 250 million pounds of milk per year.

FOREIGN DAIRY TRADE AND TRENDS

1978 Cheese Imports Up Substantially

In 1978, U.S. dairy imports totaled 2.3 billion pounds milk equivalent, up 17 percent from 1977 and well above most earlier years. Almost all of the increase was due to the nearly 16-percent increase in cheese imports. The milk equivalent of

[1] Prepared by John R. Mengel, Dairy Division, AMS, USDA.

Table 14--Dairy products: U.S. imports, quota and non-quota, total 1977-78, and January 1978-79 1/

Product	Calendar year quota	Annual			January		
		1977	1978	1978 as a % of 1977	1978	1979	1979 as a % of 1978
	Thou. lb.	Thou. lb.	Thou. lb.	Pct.	Thou. lb.	Thou. lb.	Pct.
Cheese, quota types							
American-Cheddar	10,037.5	9,337	10,748	115	1,568	1,763	112
-Other	6,096.6	6,407	7,037	110	530	196	37
Italian-Original loaves	11,500.1	9,803	8,994	92	393	690	176
-Other	1,494.0	1,343	1,317	98	19	5	26
Edam and Gouda-Natural	9,200.4	8,251	8,601	104	276	206	75
-Processed	3,151.0	1,064	3,079	289	41	---	---
Blue Mold	5,017.0	3,354	5,505	164	710	96	14
Swiss-Emmenthaler 2/	20,420.0	14,133	14,032	99	850	1,273	150
-Gruyere-process 2/	11,242.0	9,399	10,607	113	201	189	94
Other-Over 0.5% fat 2/	40,730.0	38,308	38,374	100	618	2,661	431
-Under 0.5% fat 2/	8,901.0	4,981	2,457	49	---	---	---
Total	127,789.6	106,381	110,752	104	5,207	7,078	136
Cheese, non-quota types							
Swiss-Emmenthaler		45,494	59,647	131	4,146	2,073	50
-Gruyere-process		5,881	8,329	142	502	246	49
Other		31,940	39,899	125	2,544	2,202	87
Pecorino		15,825	20,288	128	1,844	1,201	65
Roquefort		1,620	1,471	91	93	16	17
Other 3/		2,259	1,800	80	179	133	74
Total		103,018	131,434	128	9,308	5,871	63
Other quota products							
Butter	707.0	743	736	99	106	45	42
Butteroil	1,200.0	1,200	1,200	100	1,200	1,200	100
Butterfat mixtures	2,580.0	2,393	4/2,757	115	---	39	---
Ice cream	3,377.3	3,187	4/4,360	137	---	1,911	---
Frozen cream	12,540.0	12,529	4/14,586	116	5,660	1,868	33
Nonfat dry milk	1,807.0	1,825	4/2,388	131	380	307	81
Dried buttermilk	496.0	179	478	267	---	---	---
Evaporated milk	1,312.0	44	---	---	---	67	---
Condensed milk	4,079.0	767	887	116	226	---	---
Chocolate crumb-Regular	17,000.0	6,817	8,686	127	397	---	---
-Lowfat	4,680.0	2,425	1,546	64	40	---	---
Animal feed with milk solids	16,300.0	12,815	14,647	114	967	1,025	106
Non-quota products							
Casein		144,245	137,134	95	12,324	15,203	123
Lactose		3,991	3,112	78	317	55	17
Milk equivalent, fat solids basis total all products	1,305,620	1,967,758	2,305,258	117	227,713	175,402	77

1/ Preliminary. 2/ Subject to quota if f.o.b. price is less than "pricebreak" (7 cents above the American cheese support purchase price, rounded to nearest whole cent--$1.13 effective November 2, 1978. 3/ Gjetost, Bryndza, Gammelost and Noekkelost, and Goya. 4/ Probable error in reported data.

Dairy product imports[1]
(Quota and non-quota)

Year	Yearly quota[2]	Imports subject to quota	Imports not subject to quota	Total
	Million pounds			
1970	946	845	1,033	1,878
1971	973	776	580	1,356
1972	1,166	1,023	671	1,694
1973	3,608	3,263	596	3,859
1974	2,293	1,968	955	2,923
1975	1,306	976	693	1,669
1976	1,306	1,037	906	1,943
1977	1,306	1,119	849	1,968
1978	1,306	1,200	1,105	2,305

[1] Milk equivalent. [2] Includes temporary quotas authorized in 1973 and 1974.

nonquota cheese rose to about 1.1 billion pounds, while quota cheese imports accounted for another 0.9 billion pounds. Other dairy products added 0.3 billion pounds milk equivalent, slightly more than in 1977. Imports of all products subject to quota totaled 92 percent of the 1.3-billion-pound quota, compared with 86 percent the previous year (table 14).

Last year's cheese imports rose about 33 million pounds from the 1977 level. More than 28 million pounds of the additional cheese imports were in nonquota categories. Strong cheese demand in 1978 boosted imports throughout the year. Importers, partially in anticipation of the imposition (after January 4, 1979) of countervailing duties on many cheese varieties from Europe, imported 30 percent more cheese in November-December than a year earlier.

U.S. dairy trade
(milk equivalent)

Year and quarters	Imports		Exports	Shipments[1]
	Cheese	Other		
	Million pounds			
1977				
1st	343	140	107	123
2nd	315	51	116	170
3rd	418	14	138	142
4th	624	61	99	92
Year[2]	1,701	267	459	527
1978				
1st	379	157	86	[3]168
2nd	337	51	105	[3]156
3rd	484	24	85	[3]145
4th	799	72	91	[3]133
Year[2]	1,999	307	368	[3]602

[1] To U.S. territories. [2] May not add due to rounding. [3] May not be completely comparable to earlier years.

Quotas were about filled for all other quota products except canned milk, chocolate crumb, and animal feed. However, imports of these products are held to low levels by the quota system.

After a large increase in the first half of 1978, a drop from a year earlier of almost a fifth during July-December brought total casein imports to 137 million pounds, down 5 percent from 1977. Lactose imports in 1978 were more than a fifth smaller than a year earlier.

U.S. exports in 1978 declined a fifth to less than 0.4 billion pounds milk equivalent. Less butter, dry whole milk, and American cheese were exported but exports of canned milk and other cheese were larger. On the other hand, food aid exports of nonfat dry milk and corn-soy-milk mixture were sharply higher.

Shipments of dairy products to U.S. Territories rose to 0.6 billion pounds milk equivalent. Most products were shipped in larger amounts than in 1977.

EC Surplus Very Heavy in 1978

The European Community (EC) continued to have major problems controlling dairy surpluses in 1978. Milk production was up almost 4 percent from 1977, with deliveries to plants up 5 percent. Most of the increase was due to heavier output per cow as milk cow numbers were just barely higher.

Most of the increase in milk supplies went into butter-powder production, as cheese output was up only 3 percent from 1977. Production of both butter and nonfat dry milk exceeded a year earlier by about 8 percent.

Increases in consumption did not keep pace with the milk production increase. Cheese use was up 3 percent but butter consumption was up only 1 percent. Fluid milk use was about the same. Spurred by subsidy programs, use of nonfat dry milk (primarily in feed) was up 13 percent.

At yearend, butter stocks under EC regulation were up quite sharply from a year earlier. On the other hand, intervention stocks of nonfat dry milk were down almost a third but still totaled 670,000 metric tons (1.5 billion pounds).

Surpluses were more under control in other countries with supported dairy economies. Milk deliveries were about the same or slightly lower (except for Sweden) and strong demand for milk for cheese reduced butter-powder output.

In New Zealand, milk output during the current season got off to a slow start but was catching up rapidly. As usual, pasture conditions in the second half of the season (which ends in May) will have a heavy influence on their season total.

Table 15.--U.S. Dairy Situation at a Glance

Item	Unit or base period	1977	1978						1979
		Jan.	Jan.	Feb.	Sept.	Oct.	Nov.	Dec.	Year	Jan.
Production and cow numbers:										
Total milk	Mil. lb.	9,887	9,994	9,287	9,733	9,832	9,364	9,788	121,928	10,035
Milk per cow	Lb.	897	915	852	899	907	864	902	11,240	925
Number of milk cows	Thou.	11,026	10,923	10,903	10,832	10,837	10,837	10,853	10,848	10,848
Prices received by farmers:										
All milk, sold to plants, 100 pounds	Dol.	9.65	10.20	10.20	10.90	11.30	11.60	11.80	10.58	11.90
Percentage of parity 1/	Pct.	74	73	72	75	75	76	78	75	75
Manufacturing grade milk, 100 pounds	Dol.	8.48	9.12	9.18	9.92	10.50	10.70	10.90	9.68	10.90
Parity equivalent	Dol.	10.67	11.47	11.64	12.33	12.41	12.41	12.50	12.09	13.31
Fat content	Pct.	3.80	3.78	3.74	3.63	3.76	3.81	3.84	3.68	3.82
Minnesota-Wisconsin (3.5% fat), 100 pounds	Dol.	8.19	8.91	9.00	9.90	10.18	10.44	10.60	9.57	10.55
Milk eligible for fluid market, 100 pounds	Dol.	9.91	10.50	10.50	11.10	11.50	11.80	12.00	10.79	12.10
Price ratios and dairy ration values:										
Milk-feed	Lb.	1.51	1.69	1.70	1.81	1.86	1.88	1.88	1.73	8/
Manufacturing grade milk-hog	Lb.	.22	.21	.19	.21	.21	.23	.23	.21	.22
Manufacturing grade milk-beef cattle	Lb.	.26	.25	.23	.19	.20	.21	.20	.20	.18
Value of concentrate ration fed milk cows	Dol.	6.39	6.05	6.01	6.01	6.08	6.16	6.27	6.13	---
Farm cash receipts from dairy products	Mil. dol.	946	1,023	941	1,016	1,071	1,043	1,117	12,701	1,184
Production of factory products:										
Butter	Mil. lb.	105.5	108.3	95.7	64.5	71.1	66.7	77.2	999.0	97.4
American cheese, whole milk	Mil. lb.	168.7	163.6	154.3	149.2	159.0	153.5	171.8	2093.6	173.8
Cheese, other than American	Mil. lb.	96.9	110.5	106.3	115.7	120.4	122.8	128.3	1423.0	115.0
Canned milk, unskimmed	Mil. lb.	61.8	56.2	52.1	58.2	58.9	52.3	59.3	777.2	58.0
Dry whole milk	Mil. lb.	6.3	6.8	4.5	5.0	4.9	5.0	5.8	72.8	7.2
Frozen products 2/	Mil. gal.	69.0	69.5	75.5	103.1	90.6	79.2	71.0	1159.6	74.3
Creamed cottage cheese	Mil. lb.	68.4	68.8	67.9	72.2	72.0	68.2	60.9	875.0	69.0
Total whole milk equivalent 3/	Mil. lb.	5,272	5,398	5,093	4,854	4,837	4,517	4,833	64,910	5,285
Nonfat dry milk, human use	Mil. lb.	70.3	79.7	70.6	59.1	49.0	41.9	54.4	928.8	55.1
Wholesale prices:										
Butter, Grade A, Chicago	Ct.	90.8	100.7	100.7	115.8	115.6	121.1	118.8	109.8	111.3
Cheese, American (40-pound blocks), f.o.b. Wisconsin assembling points, pound	Ct.	92.6	100.1	100.8	110.8	115.5	117.1	119.4	107.1	119.5
Evaporated milk, case	Dol.	14.40	15.46	15.46	16.31	16.57	17.01	17.01	16.20	17.01
Dry whole milk, pound	Ct.	76.8	84.3	84.8	92.6	94.9	97.3	99.0	89.8	98.2
Nonfat dry milk, pound	Ct.	62.9	68.1	68.0	72.5	73.2	74.7	76.5	71.4	76.4
Dairy products and ice cream index (BLS)	1967=100	166.8	178.0	178.7	192.9	197.0	199.6	202.7	188.4	203.4
Retail prices (BLS):										
Consumer price index 4/	1967=100	175.3	187.2	188.4	199.3	200.9	202.0	202.9	195.4	204.7
All food 4/	1967=100	183.4	199.2	202.0	215.6	216.8	217.8	219.4	211.4	223.9
All dairy products 4/	1967=100	171.3	177.7	178.8	188.8	191.1	193.2	196.4	185.6	198.4
Fluid milk and cream	12/77=100	---	100.6	101.0	106.5	107.8	108.9	110.6	104.8	111.8
Whole milk	1967=100	161.7	164.8	165.5	174.2	176.5	178.4	181.2	171.7	183.5
Other	12/77=100	---	100.4	100.7	106.6	107.6	108.5	110.4	104.5	112.1
Manufactured dairy products	12/77=100	---	100.3	101.1	107.0	108.3	109.7	111.5	105.0	112.7
Butter	1967=100	154.1	169.6	169.3	187.0	189.3	190.7	195.4	179.4	195.8
Cheese	12/77=100	---	100.5	101.2	106.7	107.8	109.4	111.7	104.8	112.9
Frozen desserts	12/77=100	---	99.4	100.7	106.4	108.0	109.4	109.9	104.7	111.8
Other	12/77=100	---	100.2	101.6	105.4	107.0	107.7	109.3	104.4	110.1
Margarine	1967=100	190.5	213.9	214.8	231.9	231.6	232.1	233.2	226.1	233.6
Stocks, end of month:										
Creamery butter	Mil. lb.	67.6	195.7	215.9	266.6	251.8	228.8	206.9	---	207.4
Cheese, total 5/	Mil. lb.	485.8	479.0	454.0	511.9	485.9	456.7	457.3	---	441.0
Canned milk, unskimmed	Mil. lb.	66.3	59.8	52.9	136.0	113.8	84.4	70.3	---	66.0
Dry whole milk	Mil. lb.	10.4	5.9	5.4	7.4	5.3	3.7	4.4	---	4.9
Total whole milk equivalent 6/	Mil. lb.	6,201	8,742	8,897	10,662	10,048	9,215	8,730	---	8,581
Nonfat dry milk	Mil. lb.	465.4	689.3	681.5	681.0	637.1	601.7	585.1	---	559.1
Commercial disappearance:										
Creamery butter	Mil. lb.	71.9	68.1	61.4	79.9	73.3	77.6	87.4	908.2	82.6
Cheese, American	Mil. lb.	151.7	168.7	170.7	169.0	173.9	177.7	174.1	2,084.1	179.4
Cheese, other than American	Mil. lb.	110.9	121.5	120.6	128.0	144.8	152.7	165.0	1633.0	128.6
Canned milk, unskimmed	Mil. lb.	66.1	70.3	57.6	55.9	79.4	80.2	72.1	765.4	61.0
Milk in all products	Mil. lb.	8,963	9,175	8,701	10,153	10,070	9,929	10,148	119,206	9,710
Nonfat dry milk	Mil. lb.	52.8	50.4	54.3	63.3	54.0	52.3	47.3	666.8	56.0
USDA net removals:										
Butter	Mil. lb.	32.4	26.0	26.7	-6.3	---	-7.0	-3.1	112.0	9.3
Cheddar cheese	Mil. lb.	17.8	1.4	.3	---	---	---	---	39.7	---
Nonfat dry milk	Mil. lb.	24.8	29.1	22.6	7.7	6.9	4.9	3.4	285.0	3.5
Evaporated milk	Mil. lb.	.3	1.6	1.3	1.1	1.8	1.5	1.3	17.6	1.4
Total whole milk equivalent	Mil. lb.	846	554	557	-127	4	-142	-62	2,743	188
Fluid sales, change from year earlier: 7/										
Whole milk	Pct.	-2.8	-.4	-1.2	-3.3	-1.8	-3.4	-2.1	-2.2	-4.0
Low-fat and skim milk	Pct.	+7.7	+6.7	+6.1	+3.1	+4.7	+4.8	+5.9	+4.8	+5.1
Total fluid milk	Pct.	+0.7	+2.1	+1.5	-.9	+.6	-.3	+.8	+.2	-.6
Cream and cream mixtures	Pct.	-6.0	-3.2	-1.8	-5.2	-3.0	-6.4	N.A.	-1.5	N.A.

1/ Seasonally adjusted price as percentage of parity price.
2/ Ice cream, ice milk, and sherbet.
3/ Includes manufactured products for which current monthly series are available.
4/ For all urban consumers starting January 1978.
5/ Natural, plus process American cheese held by CCC.
6/ Excludes cream and bulk condensed milk.
7/ Daily average sales in Federal and State Marketing areas.
8/ Replaced by different series.
N.A. = Not Available.

LIST OF TABLES

Table	Title	Page
1	Milk production, milk per cow, and milk cows on farms, by months, 1972-78, with comparisons	6
2	Milk cow numbers, milk per cow, and changes by production regions, 1978	7
3	Milk: Production by production regions, 1974-78, with comparisons	8
4	Milk production and factors affection supply, United States, selected years, 1955-79	9
5	Milk-feed price ratio, by months, 1970-78	11
6	Production of selected manufactured dairy products, 1976-78	18
7	Commercial disappearance: Total milk, annual and by quarters, 1976-78	16
8	Commercial disappearance: Selected dairy products, United States, annual 1969-78, by quarters, 1977-78	17
9	Factors influencing and indicative of the demand for milk and dairy products, United States, selected years, 1960-78	19
10	Milk and dairy product sales (domestic disappearance, commercial sources) total and per capita, selected years, United States, 1970-78	20
11	Milk solids and selected dairy products: Supply and utilization, 1970-78	21
12	Stocks of dairy products, United States, end of year or month, 1965-78	23
13	Dairy products removed from the commercial market by programs of the United States Department of Agriculture, 1949-78	24
14	Dairy Products: U.S. imports, quota and non-quota, total 1977-78, and January 1978-79	26
15	U.S. dairy situation at a glance	28

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